```
=> e schneerson rachel/au
E1            1     SCHNEERSON R */AU
E2            3     SCHNEERSON R S/AU
E3          208 --> SCHNEERSON RACHEL/AU
E4            1     SCHNEERSON S/AU
E5            1     SCHNEERSON SARAH/AU
E6            8     SCHNEERSONPORAT S/AU
E7            1     SCHNEESANS M/AU
E8            2     SCHNEEVEIS P/AU
E9            1     SCHNEEVOGT E/AU
E10           1     SCHNEEVOIGHT ALWIN/AU
E11           2     SCHNEEVOIGT A/AU
E12          18     SCHNEEVOIGT ALWIN/AU

=> s e1-e3 and anthra?
L1           18 ("SCHNEERSON R *"/AU OR "SCHNEERSON R S"/AU OR "SCHNEERSON RACHE
                L"/AU) AND ANTHRA?

=> dup rem l1
PROCESSING COMPLETED FOR L1
L2           10 DUP REM L1 (8 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 10 ANSWERS - CONTINUE? Y/(N):y


L2   ANSWER 1 OF 10  USPATFULL on STN
AN     2006:158613  USPATFULL
TI     Poly-gamma-glutamic conjugates for eliciting immune responses directed
       against bacilli
IN     Schneerson, Rachel, Bethesda, MD, UNITED STATES
       Leppla, Stephen, Bethesda, MD, UNITED STATES
       Robbins, John B., Chevy Chase, MD, UNITED STATES
       Shiloach, Joseph, Rockville, MD, UNITED STATES
       Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
       Liu, Darrell, Bethesda, MD, UNITED STATES
       Majadly, Fathy, Frederick, MD, UNITED STATES
PI     US 2006134143      A1   20060622
AI     US 2004-559825     A1   20040604 (10)
       WO 2004-US17736         20040604
                               20051202  PCT 371 date
PRAI   US 2003-476598P     20030605 (60)
DT     Utility
FS     APPLICATION
LREP   KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
       OR, 97204-2988, US
CLMN   Number of Claims: 36
ECL    Exemplary Claim: 1
DRWN   2 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     Immunogenic compositions and methods for eliciting an immune response
       against B. anthracis and other bacilli are provided that
       include immunogenic conjugates of a poly-γ-glutamic acid
       (γPGA) polypeptide of B.  anthracis, or of another
       Bacillus that expresses a γPGA polypeptide. The γPGA
       conjugates elicit an effective immune response against B.
       anthracis, or against another Bacillus, in mammalian hosts to
       which the conjugates are administered.

L2   ANSWER 2 OF 10  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
     DUPLICATE 1
AN   2006:436213  BIOSIS
DN   PREV200600430224
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TI Additional conjugation methods and immunogenicity of Bacillus anthracis poly-gamma-D-glutarnic acid-protein conjugates.
AU Kubler-Kielb, Joanna [Reprint Author]; Liu, Teh-Yung; Mocca, Christopher; Majadly, Fathy; Robbins, John B.; Schneerson, Rachel
CS NICHD, NIH, LDMI, 9000 Rockville Pike,Bldg 6,Rm 1A05, Bethesda, MD 20892 USA
kielbj@mail.nih.gov
SO Infection and Immunity, (AUG 2006) Vol. 74, No. 8, pp. 4744-4749.
CODEN: INFIBR. ISSN: 0019-9567.
DT Article
LA English
ED Entered STN: 30 Aug 2006
Last Updated on STN: 30 Aug 2006
AB The capsule of Bacillus anthracis, composed of poly-gamma-D-glutamic acid (gamma DPGA), is an essential virulence factor of B. anthracis. The capsule inhibits innate host defense through its antiphagocytic action. gamma DPGA is a poor immunogen, but when covalently bound to a carrier protein, it elicits serum antibodies. To identify the optimal construct for clinical use, synthetic gamma DPGAs of different lengths were bound to carrier proteins at different densities. The advantages of the synthetic over the natural polypeptide are the homogeneous chain length and end groups, allowing conjugates to be accurately characterized and standardized and their chemical compositions to be related to their immunogenicities. In the present study, we evaluated, in addition to methods reported by us, hydrazone, oxime, and thioether linkages between gamma DPGA and several proteins, including bovine serum albumin, recombinant Pseudomonas aeruginosa exotoxin A, recombinant B. anthracis protective antigen (rPA), and tetanus toxoid (TT). The effects of the dosage and formulation on the immunogenicities of the conjugates were evaluated in mice. All conjugates were immunogenic. The optimal gamma DPGA chain length of 10 to 15 amino acids and the density, an average of 15 mol gamma DPGA per mol of protein, were confirmed. The thioether bond was the optimal linkage type, and TT and rPA were the best carriers. The optimal dosage was 1.2 to 2.5 mu g of gamma DPGA per mouse, and adsorption of the conjugates onto aluminum hydroxide significantly increased the antibody response to the protein with a lesser effect on anti-gamma DPGA levels.

L2 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 2005:1294042 CAPLUS
DN 144:35295
TI Hydrazone conjugates of haptens and antigens
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
PA United States Dept. of Health and Human Services, USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,

SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2005117965 A1 20051215 WO 2005-US19678 20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI WO 2004-US17736 A2 20040604

US 2003-476598P P 20030605

US 2004-5851 A 20041206

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L2 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the Secretary, Department of Healthand Human Services, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005117965	A1	20051215	WO 2005-US19678	20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2005000884 A1 20050106 WO 2004-US17736 20040604

WO 2005000884 C1 20051006

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,

NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

	US 2005271675	A1	20051208	US 2004-5851	20041206
PRAI	WO 2004-US17736	A	20040604		
	US 2004-5851	A	20041206		
	US 2003-476598P	P	20030605		

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ-glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14426 CAPLUS
DN 142:112426
TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection
IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		

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CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
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LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
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SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

AU 2004252091	A1	20050106	AU 2004-252091	20040604
CA 2528067	AA	20050106	CA 2004-2528067	20040604
EP 1633778	A1	20060315	EP 2004-754360	20040604

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2005271675	A1	20051208	US 2004-5851	20041206

WO 2005117965 A1 20051215 WO 2005-US19678 20050603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2006134143 A1 20060622 US 2005-559825 20051202
PRAI US 2003-476598P P 20030605
WO 2004-US17736 W 20040604
US 2004-5851 A 20041206
AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ-D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ-D-PGA and Bacillus protective antigen.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L2 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
AN 2004:331575 CAPLUS
DN 140:338027
TI Methods for preparing Bacillus anthracis protective antigen for use in vaccines
IN Shiloach, Joseph; Leppla, Stephen H.; Ramirez, Delia M.; Schneerson, Rachel; Robbins, John B.
PA USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004076638	A1	20040422	US 2002-290712	20021108
PRAI US 2001-344505P	P	20011109		

AB The authors disclose improved methods of producing and recovering B. anthracis protective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response.

L2 ANSWER 7 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2005:488548 BIOSIS
DN PREV200510291216
TI Future vaccine development at NICHD.
AU Robbins, John B. [Reprint Author]; Schneerson, Rachel
CS NICHD, Lab Dev and Mol Immun, Sect Bacterial Dis Pathogenesis and Immun, NIH, Bldg 6,Room 436, Bethesda, MD 20892 USA

robbinsj@nichd.nih.gov; schneerr@mail.nih.gov
SO Kaler, SG [Editor]; Rennert, OM [Editor]. (2004) pp. 49-59. Annals of the New York Academy of Sciences.
Publisher: NEW YORK ACAD SCIENCES, 2 EAST 63RD ST, NEW YORK, NY 10021 USA.
Series: ANNALS OF THE NEW YORK ACADEMY OF SCIENCES.
Meeting Info.: 40th Scientific Symposium of the National-Institute-of-Child-Health-and-Human-Development. Bethesda, MD, USA. 20030908,. NICHD.
ISSN: 0077-8923 (print). ISBN: 1-57331-520-6(H).
DT Book; (Book Chapter)
Conference; (Meeting)
General Review; (Literature Review)
LA English
ED Entered STN: 16 Nov 2005
Last Updated on STN: 16 Nov 2005
AB Using published data and the results of our studies, we hypothesized that a critical level of serum IgG antibodies to the surface structures of invasive pathogens (capsular polysaccharides of Haemophilus influenzae type b, pneumococcus, meningococcus, Salmonella typhi, Escherichia coli, and Staphylococcus aureus, the O-specific polysaccharide LPS domain of the LPS of Shigella, non-typhoidal Salmonella, and E. coli, and the capsular polypeptide of Bacillus anthraces) confer immunity to these pathogens. Covalent attachment to a protein increases their immunogenicity and bestows T-cell properties to these antigens. We have also shown that a critical level of serum IgG antibodies to pertussis toxin alone induces immunity on both an individual and on a community basis (herd immunity) to Bordetella pertussis. It is likely that all the above conjugates and pertussis toxoid will be incorporated into vaccines for routine infant immunization.

L2 ANSWER 8 OF 10 MEDLINE on STN
AN 2005202078 MEDLINE
DN PubMed ID: 15838097
TI Future vaccine development at NICHD.
AU Robbins John B; Schneerson Rachel
CS Laboratory of Developmental and Molecular Immunity, NICHD, NIH, Building 6, Room 436, Bethesda, MD 20892, USA.. robbinsj@nichd.nih.gov
SO Annals of the New York Academy of Sciences, (2004 Dec) Vol. 1038, pp. 49-59.
Journal code: 7506858. ISSN: 0077-8923.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200511
ED Entered STN: 20 Apr 2005
Last Updated on STN: 10 Nov 2005
Entered Medline: 9 Nov 2005
AB Using published data and the results of our studies, we hypothesized that a critical level of serum IgG antibodies to the surface structures of invasive pathogens (capsular polysaccharides of Haemophilus influenzae type b, pneumococcus, meningococcus, Salmonella typhi, Escherichia coli, and Staphylococcus aureus, the O-specific polysaccharide LPS domain of the LPS of Shigella, non-typhoidal Salmonella, and E. coli, and the capsular polypeptide of Bacillus anthraces) confer immunity to these pathogens. Covalent attachment to a protein increases their immunogenicity and bestows T-cell properties to these antigens. We have also shown that a critical level of serum IgG antibodies to pertussis toxin alone induces immunity on both an individual and on a community basis (herd immunity) to Bordetella pertussis. It is likely that all the above conjugates and pertussis toxoid will be incorporated into vaccines for routine infant immunization.

L2 ANSWER 9 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 4

AN 2003:478120 BIOSIS
DN PREV200300478120
TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of Bacillus anthracis: A potential addition to the anthrax vaccine.
AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
schneerr@mail.nih.gov
SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
ISSN: 0027-8424 (ISSN print).
DT Article
LA English
ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003
AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of Bacillus anthracis. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant B. anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin A (rEPA). To identify the optimal construct, conjugates of B. anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

L2 ANSWER 10 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 5
AN 2002:429815 BIOSIS
DN PREV200200429815
TI Development of an improved vaccine for anthrax.
AU Leppla, Stephen H. [Reprint author]; Robbins, John B.; Schneerson, Rachel; Shiloach, Joseph
CS Oral Infection and Immunity Branch, NIDCR, 30 Convent Drive, Building 30, Room 303, Bethesda, MD, 20892-4350, USA
Leppla@nih.gov
SO Journal of Clinical Investigation, (July, 2002) Vol. 110, No. 2, pp. 141-144. print.
CODEN: JCINAO. ISSN: 0021-9738.
DT Article
LA English
ED Entered STN: 14 Aug 2002
Last Updated on STN: 14 Aug 2002

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=> e leppla stephen/au
E1            1     LEPPLA S M/AU
E2            6     LEPPLA STEPHAN H/AU
E3           25 --> LEPPLA STEPHEN/AU
E4            2     LEPPLA STEPHEN A/AU
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E7           36     LEPPLA W/AU
E8            9     LEPPLA WOLFRAM/AU
E9            3     LEPPLA WOLLSIFFER G/AU
E10           1     LEPPLAWOLLSIFFER G/AU
E11           3     LEPPLE A P/AU
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=> s e1-e6 and anthra?
L3          309 ("LEPPLA S M"/AU OR "LEPPLA STEPHAN H"/AU OR "LEPPLA STEPHEN"/AU
                OR "LEPPLA STEPHEN A"/AU OR "LEPPLA STEPHEN H"/AU OR "LEPPLA
              STEVE H"/AU) AND ANTHRA?

=> s l3 and glutamic
L4           18 L3 AND GLUTAMIC

=> dup rem l4
PROCESSING COMPLETED FOR L4
L5           15 DUP REM L4 (3 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 15 ANSWERS - CONTINUE? Y/(N):y

L5   ANSWER 1 OF 15  USPATFULL on STN
AN     2006:158613  USPATFULL
TI     Poly-gamma-glutamic conjugates for eliciting immune responses
       directed against bacilli
IN     Schneerson, Rachel, Bethesda, MD, UNITED STATES
         Leppla, Stephen, Bethesda, MD, UNITED STATES
       Robbins, John B., Chevy Chase, MD, UNITED STATES
       Shiloach, Joseph, Rockville, MD, UNITED STATES
       Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
       Liu, Darrell, Bethesda, MD, UNITED STATES
       Majadly, Fathy, Frederick, MD, UNITED STATES
PI     US 2006134143      A1   20060622
AI     US 2004-559825     A1   20040604 (10)
       WO 2004-US17736         20040604
                               20051202  PCT 371 date
PRAI   US 2003-476598P     20030605 (60)
DT     Utility
FS     APPLICATION
LREP   KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
       OR, 97204-2988, US
CLMN   Number of Claims: 36
ECL    Exemplary Claim: 1
DRWN   2 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     Immunogenic compositions and methods for eliciting an immune response
       against B. anthracis and other bacilli are provided that
       include immunogenic conjugates of a poly-γ- glutamic acid
       (γPGA) polypeptide of B.  anthracis, or of another
       Bacillus that expresses a γPGA polypeptide. The γPGA
       conjugates elicit an effective immune response against B.
       anthracis, or against another Bacillus, in mammalian hosts to
       which the conjugates are administered.
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L5 ANSWER 2 OF 15 USPATFULL on STN
AN 2006:41161 USPATFULL
TI Methods and formulations comprising agonists and antagonists of nuclear hormone receptors
IN Sternberg, Esther M., 3610 UPTON AVENUE N.W., WASHINGTON, DC, UNITED STATES 20008
Webster, Jeannette I., Washington, DC, UNITED STATES
Tonelli, Leonardo H., Bethesda, MD, UNITED STATES
Leppla, Stephen H., Bethesda, MD, UNITED STATES
Moayeri, Mahtab, Bethesda, MD, UNITED STATES
PI US 2006035813 A1 20060216
AI US 2003-530254 A1 20031003 (10)
WO 2003-US31406 20031003
20050404 PCT 371 date
PRAI US 2002-416222P 20021004 (60)
US 2003-419454P 20021018 (60)
DT Utility
FS APPLICATION
LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988, US
CLMN Number of Claims: 51
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 4767
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Novel compounds, pharmaceutical compositions, and methods are provided for modulating processes mediated by nuclear hormone receptors. A partial or complete agonist or antagonist modulates, directly or indirectly, an activity of one or more nuclear hormone receptors for glucocorticoids (GRs), androgens (ARs), mineralocorticoids (MRs), progestins (PRs), estrogens (ERs), thyroid hormones (TRs), vitamin D (VDRs), retinoids (RARs and RXRs), peroxisomes (XPARs and PPARs), icosanoids (IRs), or one or more orphan receptors, such as steroid and thyroid receptors. Exemplary compounds of the disclosure are bacterial products, for example bacterial toxins, and these compounds are useful in screens for other antagonists and agonists. Related methods and compositions are provided for diagnosis, treatment and prevention of bacterial disease and associated or unrelated inflammatory, autoimmune, toxic (including shock), and chronic and/or lethal sequelae associated with bacterial infection.

L5 ANSWER 3 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
AN 2005:1294042 CAPLUS
DN 144:35295
TI Hydrazone conjugates of haptens and antigens
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
PA United States Dept. of Health and Human Services, USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005271675	A1	20051208	US 2004-5851	20041206
WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2005117965 A1 20051215 WO 2005-US19678 20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI WO 2004-US17736 A2 20040604

US 2003-476598P P 20030605

US 2004-5851 A 20041206

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L5 ANSWER 4 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the Secretary, Department of Healthand Human Services, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005117965	A1	20051215	WO 2005-US19678	20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2005000884 A1 20050106 WO 2004-US17736 20040604

WO 2005000884 C1 20051006

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	US 2005271675	A1	20051208	US 2004-5851	20041206
PRAI	WO 2004-US17736	A	20040604		
	US 2004-5851	A	20041206		
	US 2003-476598P	P	20030605		

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ- glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 5 OF 15 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14426 CAPLUS
DN 142:112426
TI Bacillus capsular poly-γ- glutamic acid conjugates for eliciting immune responses against Bacillus infection
IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

	AU 2004252091	A1	20050106	AU 2004-252091	20040604
	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2005271675 A1 20051208 US 2004-5851 20041206

WO 2005117965 A1 20051215 WO 2005-US19678 20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

US 2006134143 A1 20060622 US 2005-559825 20051202

PRAI US 2003-476598P P 20030605

WO 2004-US17736 W 20040604

US 2004-5851 A 20041206

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ- glutamic acid (γPGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ-D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ-D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L5 ANSWER 6 OF 15 USPATFULL on STN

AN 2005:292537 USPATFULL

TI Multimeric protein toxins to target cells having multiple identifying characteristics

IN Leppla, Stephen H., Bethesda, MD, UNITED STATES
Liu, Shi-Hui, Gaithersburg, MD, UNITED STATES
Bugge, Thomas H., Bethesda, MD, UNITED STATES

PA The Government of the United States, as represented by the secretary of health and Human (U.S. corporation)
Services, National Institutes of Health, Office of Technology Transfer, Rockville, MD, UNITED STATES (U.S. corporation)

PI US 2005255083 A1 20051117

AI US 2005-55557 A1 20050209 (11)

PRAI US 2004-543417P 20040209 (60)

DT Utility

FS APPLICATION

LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, 8TH FLOOR, SAN FRANCISCO, CA, 94111, US

CLMN Number of Claims: 46

ECL Exemplary Claim: 1

DRWN 8 Drawing Page(s)

LN.CNT 4299

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides compositions comprising modified bacterial toxins and methods for using the modified bacterial toxins for targeting particular cell populations and for treating diseases.

L5 ANSWER 7 OF 15 USPATFULL on STN
AN 2005:226972 USPATFULL
TI Anthrax lethal factor is a mapk kinase protease
IN Duesbery, Nicholas, Grand Rapids, MI, UNITED STATES
Webb, Craig, Rockford, MI, UNITED STATES
Leppla, Stephen, Bethesda, MD, UNITED STATES
Vande Woude, George, Ada, MI, UNITED STATES
PA The Gov. of the USA as represented by the Secretary of the Dept of Health and Human Services, Rockville, MD, UNITED STATES (U.S. corporation)
PI US 2005196822 A1 20050908
US 7056693 B2 20060606
AI US 2005-112137 A1 20050422 (11)
RLI Division of Ser. No. US 2002-93200, filed on 5 Mar 2002, GRANTED, Pat. No. US 6911203 Division of Ser. No. US 2000-623104, filed on 13 Dec 2000, GRANTED, Pat. No. US 6485925 A 371 of International Ser. No. WO 1999-US7129, filed on 31 Mar 1999
PRAI US 1998-80330P 19980401 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, 8TH FLOOR, SAN FRANCISCO, CA, 94111, US
CLMN Number of Claims: 8
ECL Exemplary Claim: 1-24
DRWN 1 Drawing Page(s)
LN.CNT 2431
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to in vitro and ex vivo methods of screening for modulators, homologues, and mimetics of lethal factor mitogen activated protein kinase kinase (MAPKK) protease activity, as well as methods of treating cancer by administering LF to transformed cells.

L5 ANSWER 8 OF 15 USPATFULL on STN
AN 2005:143741 USPATFULL
TI Imaging the activity of extracellular protease in cells using mutant anthrax toxin protective antigens that are cleaved by specific extracellular proteases
IN Bugge, Thomas H., Bethesda, MD, UNITED STATES
Leppla, Stephen H., Bethesda, MD, UNITED STATES
Liu, Shi-Hui, Rockville, MD, UNITED STATES
Mitola, David, Baltimore, MD, UNITED STATES
PA The Government of the United States as represented by the Secretary of the Department of Health and, Rockville, MD, UNITED STATES, 20852-3804 (U.S. corporation)
PI US 2005123476 A1 20050609
AI US 2003-488806 A1 20020905 (10)
WO 2002-US28397 20020905
PRAI US 2001-317550P 20010905 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, 8TH FLOOR, SAN FRANCISCO, CA, 94111, US
CLMN Number of Claims: 28
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 4268
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB This invention pertains to methods for imaging the activity of extracellular proteases in cells using the anthrax binary toxin-system to target cells expressing extracellular proteases with mutant anthrax toxin protective antigens (μPrAg) that bind to receptors on the cells and are cleaved by a specific extracellular

protease expressed by the cells, and ligands that specifically bind to the cleaved μPrAg and are linked to a moiety that is detectable by an imaging procedure. The μPrAg proteins used in the methods comprise a protease cleavage site that is cleaved by a specific extracellular protease and is in place of the furin cleavage site of the native PrAg. The methods are useful for diagnosing and treating diseases and undesirable physiological conditions correlated with the activity of extracellular proteases, and for optimizing the therapeutic efficacy of drugs used to treat such diseases and conditions.

L5 ANSWER 9 OF 15 USPATFULL on STN
AN 2004:221352 USPATFULL
TI Methods for preparing Bacillus anthracis sporulation deficient mutants and for producing recombinant Bacillus anthracis protective antigen for use in vaccines
IN Leppla, Stephen H., Bethesda, MD, UNITED STATES
Rosovitz, Mary Jo, Kensington, MD, UNITED STATES
Hsu, S. Dana, Bethesda, MD, UNITED STATES
PI US 2004171121 A1 20040902
AI US 2003-638006 A1 20030808 (10)
PRAI US 2002-402285P 20020809 (60)
DT Utility
FS APPLICATION
LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988
CLMN Number of Claims: 67
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 1786
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to improved methods of producing and recovering sporulation-deficient B. anthracis mutant stains, and for producing and recovering recombinant B. anthracis protective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response in humans, including responses which provide protection against, or reduce the severity of, B. anthracis bacterial infections and which are useful to prevent and/or treat illnesses caused by B. anthracis, such as inhalation anthrax, cutaneous anthrax and gastrointestinal anthrax.

L5 ANSWER 10 OF 15 USPATFULL on STN
AN 2004:100777 USPATFULL
TI Methods for preparing bacillus anthracis protective antigen for use in vaccines
IN Shiloach, Joseph, Rockville, MD, UNITED STATES
Leppla, Stephen H., Bethesda, MD, UNITED STATES
Ramirez, Delia M., Bethesda, MD, UNITED STATES
Schneerson, Rachel, Bethesda, MD, UNITED STATES
Robbins, John B., Chevy Chase, MD, UNITED STATES
PI US 2004076638 A1 20040422
AI US 2002-290712 A1 20021108 (10)
PRAI US 2001-344505P 20011109 (60)
DT Utility
FS APPLICATION
LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, ONE WORLD TRADE CENTER, PORTLAND, OR, 97204-2988
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 1273
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention relates to improved methods of producing and recovering B.

anthracisprotective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response in humans, including responses which provide protection against, or reduce the severity of, B. anthracis bacterial infections and which are useful to prevent and/or treat illnesses caused by B. anthracis, such as inhalation anthrax, cutaneous anthrax and gastrointestinal anthrax.

L5 ANSWER 11 OF 15 USPATFULL on STN
AN 2003:140492 USPATFULL
TI Anthrax lethal factor is a MAPK kinase protease
IN Duesbery, Nicholas, Grand Rapids, MI, UNITED STATES
Webb, Craig, Rockford, MI, UNITED STATES
Leppla, Stephen, Bethesda, MD, UNITED STATES
Vande Woude, George, Ada, MI, UNITED STATES
PI US 2003096333 A1 20030522
US 6893835 B2 20050517
AI US 2002-93248 A1 20020305 (10)
RLI Division of Ser. No. US 2000-623104, filed on 13 Dec 2000, GRANTED, Pat. No. US 6485925
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 61
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 2521
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to in vitro and ex vivo methods of screening for modulators, homologues, and mimetics of lethal factor mitogen activated protein kinase kinase (MAPKK) protease activity, as well as methods of treating cancer by administering LF to transformed cells.

L5 ANSWER 12 OF 15 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 2
AN 2003:478120 BIOSIS
DN PREV200300478120
TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of Bacillus anthracis: A potential addition to the anthrax vaccine.
AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
schneerr@mail.nih.gov
SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
ISSN: 0027-8424 (ISSN print).
DT Article
LA English
ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003
AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of Bacillus anthracis. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or

corresponding synthetic peptides were bound to BSA, recombinant B. anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin A (rEPA). To identify the optimal construct, conjugates of B. anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

L5 ANSWER 13 OF 15 USPATFULL on STN
AN 2002:329841 USPATFULL
TI Anthrax lethal factor is a MAPK kinase protease
IN Duesbery, Nicholas, Grand Rapids, MI, UNITED STATES
Webb, Craig, Rockford, MI, UNITED STATES
Leppla, Stephen, Bethesda, MD, UNITED STATES
Vande Woude, George, Ada, MI, UNITED STATES
PI US 2002187521 A1 20021212
US 6911203 B2 20050628
AI US 2002-93200 A1 20020305 (10)
RLI Division of Ser. No. US 2000-623104, filed on 13 Dec 2000, ABANDONED A 371 of International Ser. No. WO 1999-US7126, filed on 31 Mar 1999, PENDING
PRAI US 1998-80330P 19980401 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 61
ECL Exemplary Claim: 1
DRWN 1 Drawing Page(s)
LN.CNT 2519
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to in vitro and ex vivo methods of screening for modulators, homologues, and mimetics of lethal factor mitogen activated protein kinase kinase (MAPKK) protease activity, as well as methods of treating cancer by administering LF to transformed cells.

L5 ANSWER 14 OF 15 USPATFULL on STN
AN 2002:310778 USPATFULL
TI Anthrax lethal factor is a MAPK kinase protease
IN Duesbery, Nicholas, Grand Rapids, MI, United States
Webb, Craig, Rockford, MI, United States
Leppla, Stephen, Bethesda, MD, United States
Woude, George Vande, Ada, MI, United States
PA The United States of America as represented by the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 6485925 B1 20021126
WO 9950439 19991007
AI US 2000-623104 20001213 (9)
WO 1999-US7126 19990331
20001213 PCT 371 date
PRAI US 1998-80330P 19980401 (60)

DT Utility
FS GRANTED
EXNAM Primary Examiner: Prouty, Rebecca E.; Assistant Examiner: Walicka, M.
LREP Townsend and Townsend and Crew LLP
CLMN Number of Claims: 15
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 2373
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to in vitro and ex vivo methods of screening for modulators, homologues, and mimetics of lethal factor mitogen activated protein kinase kinase (MAPKK) protease activity, as well as methods of treating cancer by administering LF to transformed cells.

L5 ANSWER 15 OF 15 USPATFULL on STN
AN 97:94207 USPATFULL
TI Anthrax toxin fusion proteins and related methods
IN Leppla, Stephen H., Bethesda, MD, United States
Klimpel, Kurt R., Gaithersburg, MD, United States
Arora, Naveen, Delhi, India
Singh, Yogendra, Delhi, India
Nichols, Peter J., Welling Kent, United Kingdom
PA The Government of the United States as represented by the Secretary of the Department of Health and Human Services, Washington, DC, United States (U.S. government)
PI US 5677274 19971014
AI US 1993-82849 19930625 (8)
RLI Continuation-in-part of Ser. No. US 1993-21601, filed on 12 Feb 1993, now patented, Pat. No. US 5591631
DT Utility
FS Granted
EXNAM Primary Examiner: Jagannathan, Vasu S.; Assistant Examiner: Romeo, David S.
LREP Townsend and Townsend and Crew
CLMN Number of Claims: 12
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 3382
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides a nucleic acid encoding a fusion protein comprising a nucleotide sequence encoding the anthrax protective antigen (PA) binding domain of the native anthrax lethal factor (LF) protein and a nucleotide sequence encoding an activity inducing domain of a second protein. Also provided is a nucleic acid encoding a fusion protein comprising a nucleotide sequence encoding the translocation domain and LF binding domain of the native anthrax PA protein and a nucleotide sequence encoding a ligand domain which specifically binds a cellular target. Proteins encoded by the nucleic acid of the invention, vectors comprising the nucleic acids and hosts capable of expressing the protein encoded by the nucleic acids are also provided. A composition comprising the PA binding domain of the native LF protein chemically attached to a non-LF activity inducing moiety is further provided. A method for delivering an activity to a cell is provided. The steps of the method include a) administering to the cell a protein comprising the translocation domain and the LF binding domain of the native PA protein and a ligand domain, and b) administering to the cell a product comprising the PA binding domain of the native LF protein and a non-LF activity inducing moiety, whereby the product administered in step b) is internalized into the cell and performs the activity within the cell. The invention also provides proteins including an anthrax protective antigen which has been mutated to replace the trypsin cleavage site with residues recognized specifically by the HIV-1 protease.

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=> e robbins john b/au
E1          87     ROBBINS JOHN/AU
E2         126     ROBBINS JOHN A/AU
E3         288 --> ROBBINS JOHN B/AU
E4          22     ROBBINS JOHN C/AU
E5           1     ROBBINS JOHN CHAPMAN/AU
E6          13     ROBBINS JOHN D/AU
E7          15     ROBBINS JOHN E/AU
E8           1     ROBBINS JOHN F/AU
E9           1     ROBBINS JOHN F W/AU
E10          1     ROBBINS JOHN FRANCIS WHITING/AU
E11          3     ROBBINS JOHN J JR/AU
E12          3     ROBBINS JOHN J SR/AU

=> s e3 and anthra?
L6          18 "ROBBINS JOHN B"/AU AND ANTHRA?

=> dup rem l6
PROCESSING COMPLETED FOR L6
L7           10 DUP REM L6 (8 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 10 ANSWERS - CONTINUE? Y/(N):y

L7   ANSWER 1 OF 10  USPATFULL on STN
AN     2006:158613  USPATFULL
TI     Poly-gamma-glutamic conjugates for eliciting immune responses directed
       against bacilli
IN     Schneerson, Rachel, Bethesda, MD, UNITED STATES
       Leppla, Stephen, Bethesda, MD, UNITED STATES
         Robbins, John B., Chevy Chase, MD, UNITED STATES
       Shiloach, Joseph, Rockville, MD, UNITED STATES
       Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
       Liu, Darrell, Bethesda, MD, UNITED STATES
       Majadly, Fathy, Frederick, MD, UNITED STATES
PI     US 2006134143      A1   20060622
AI     US 2004-559825     A1   20040604 (10)
       WO 2004-US17736         20040604
                               20051202  PCT 371 date
PRAI   US 2003-476598P     20030605 (60)
DT     Utility
FS     APPLICATION
LREP   KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
       OR, 97204-2988, US
CLMN   Number of Claims: 36
ECL    Exemplary Claim: 1
DRWN   2 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     Immunogenic compositions and methods for eliciting an immune response
       against B. anthracis and other bacilli are provided that
       include immunogenic conjugates of a poly-γ-glutamic acid
       (γPGA) polypeptide of B.  anthracis, or of another
       Bacillus that expresses a γPGA polypeptide. The γPGA
       conjugates elicit an effective immune response against B.
       anthracis, or against another Bacillus, in mammalian hosts to
       which the conjugates are administered.

L7   ANSWER 2 OF 10  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
     DUPLICATE 1
AN   2006:436213  BIOSIS
DN   PREV200600430224
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TI Additional conjugation methods and immunogenicity of Bacillus anthracis poly-gamma-D-glutarnic acid-protein conjugates.
AU Kubler-Kielb, Joanna [Reprint Author]; Liu, Teh-Yung; Mocca, Christopher; Majadly, Fathy; Robbins, John B.; Schneerson, Rachel
CS NICHD, NIH, LDMI, 9000 Rockville Pike,Bldg 6,Rm 1A05, Bethesda, MD 20892 USA
kielbj@mail.nih.gov
SO Infection and Immunity, (AUG 2006) Vol. 74, No. 8, pp. 4744-4749.
CODEN: INFIBR. ISSN: 0019-9567.
DT Article
LA English
ED Entered STN: 30 Aug 2006
Last Updated on STN: 30 Aug 2006
AB The capsule of Bacillus anthracis, composed of poly-gamma-D-glutamic acid (gamma DPGA), is an essential virulence factor of B. anthracis. The capsule inhibits innate host defense through its antiphagocytic action. gamma DPGA is a poor immunogen, but when covalently bound to a carrier protein, it elicits serum antibodies. To identify the optimal construct for clinical use, synthetic gamma DPGAs of different lengths were bound to carrier proteins at different densities. The advantages of the synthetic over the natural polypeptide are the homogeneous chain length and end groups, allowing conjugates to be accurately characterized and standardized and their chemical compositions to be related to their immunogenicities. In the present study, we evaluated, in addition to methods reported by us, hydrazone, oxime, and thioether linkages between gamma DPGA and several proteins, including bovine serum albumin, recombinant Pseudomonas aeruginosa exotoxin A, recombinant B. anthracis protective antigen (rPA), and tetanus toxoid (TT). The effects of the dosage and formulation on the immunogenicities of the conjugates were evaluated in mice. All conjugates were immunogenic. The optimal gamma DPGA chain length of 10 to 15 amino acids and the density, an average of 15 mol gamma DPGA per mol of protein, were confirmed. The thioether bond was the optimal linkage type, and TT and rPA were the best carriers. The optimal dosage was 1.2 to 2.5 mu g of gamma DPGA per mouse, and adsorption of the conjugates onto aluminum hydroxide significantly increased the antibody response to the protein with a lesser effect on anti-gamma DPGA levels.

L7 ANSWER 3 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 2005:1294042 CAPLUS
DN 144:35295
TI Hydrazone conjugates of haptens and antigens
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
PA United States Dept. of Health and Human Services, USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005271675	A1	20051208	US 2004-5851	20041206
WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,

SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2005117965 A1 20051215 WO 2005-US19678 20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI WO 2004-US17736 A2 20040604

US 2003-476598P P 20030605

US 2004-5851 A 20041206

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L7 ANSWER 4 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:1314018 CAPLUS

DN 144:35300

TI Methods for preparing immunogenic conjugates for use in vaccines

IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph

PA The Government of the United States of America as Represented by the Secretary, Department of Healthand Human Services, USA

SO PCT Int. Appl., 53 pp.

CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005117965	A1	20051215	WO 2005-US19678	20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

WO 2005000884 A1 20050106 WO 2004-US17736 20040604

WO 2005000884 C1 20051006

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,

NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
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SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

	US 2005271675	A1	20051208	US 2004-5851	20041206
PRAI	WO 2004-US17736	A	20040604		
	US 2004-5851	A	20041206		
	US 2003-476598P	P	20030605		

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ-glutamic acids to carriers such as bovine sérum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 5 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14426 CAPLUS
DN 142:112426
TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection
IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
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LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

AU 2004252091	A1	20050106	AU 2004-252091	20040604
CA 2528067	AA	20050106	CA 2004-2528067	20040604
EP 1633778	A1	20060315	EP 2004-754360	20040604

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT,
IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2005271675	A1	20051208	US 2004-5851	20041206

WO 2005117965 A1 20051215 WO 2005-US19678 20050603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2006134143 A1 20060622 US 2005-559825 20051202
PRAI US 2003-476598P P 20030605
WO 2004-US17736 W 20040604
US 2004-5851 A 20041206
AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ-D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ-D-PGA and Bacillus protective antigen.
RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L7 ANSWER 6 OF 10 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 3
AN 2004:331575 CAPLUS
DN 140:338027
TI Methods for preparing Bacillus anthracis protective antigen for use in vaccines
IN Shiloach, Joseph; Leppla, Stephen H.; Ramirez, Delia M.; Schneerson, Rachel; Robbins, John B.
PA USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2004076638	A1	20040422	US 2002-290712	20021108
US 2001-344505P	P	20011109		

AB The authors disclose improved methods of producing and recovering B. anthracis protective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response.

L7 ANSWER 7 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
AN 2005:488548 BIOSIS
DN PREV200510291216
TI Future vaccine development at NICHD.
AU Robbins, John B. [Reprint Author]; Schneerson, Rachel
CS NICHD, Lab Dev and Mol Immun, Sect Bacterial Dis Pathogenesis and Immun, NIH, Bldg 6,Room 436, Bethesda, MD 20892 USA

robbinsj@nichd.nih.gov; schneerr@mail.nih.gov
SO Kaler, SG [Editor]; Rennert, OM [Editor]. (2004) pp. 49-59. Annals of the New York Academy of Sciences.
Publisher: NEW YORK ACAD SCIENCES, 2 EAST 63RD ST, NEW YORK, NY 10021 USA.
Series: ANNALS OF THE NEW YORK ACADEMY OF SCIENCES.
Meeting Info.: 40th Scientific Symposium of the National-Institute-of-Child-Health-and-Human-Development. Bethesda, MD, USA. 20030908,. NICHD.
ISSN: 0077-8923 (print). ISBN: 1-57331-520-6(H).
DT Book; (Book Chapter)
Conference; (Meeting)
General Review; (Literature Review)
LA English
ED Entered STN: 16 Nov 2005
Last Updated on STN: 16 Nov 2005
AB Using published data and the results of our studies, we hypothesized that a critical level of serum IgG antibodies to the surface structures of invasive pathogens (capsular polysaccharides of Haemophilus influenzae type b, pneumococcus, meningococcus, Salmonella typhi, Escherichia coli, and Staphylococcus aureus, the O-specific polysaccharide LPS domain of the LPS of Shigella, non-typhoidal Salmonella, and E. coli, and the capsular polypeptide of Bacillus anthraces) confer immunity to these pathogens. Covalent attachment to a protein increases their immunogenicity and bestows T-cell properties to these antigens. We have also shown that a critical level of serum IgG antibodies to pertussis toxin alone induces immunity on both an individual and on a community basis (herd immunity) to Bordetella pertussis. It is likely that all the above conjugates and pertussis toxoid will be incorporated into vaccines for routine infant immunization.

L7 ANSWER 8 OF 10 MEDLINE on STN
AN 2005202078 MEDLINE
DN PubMed ID: 15838097
TI Future vaccine development at NICHD.
AU Robbins John B; Schneerson Rachel
CS Laboratory of Developmental and Molecular Immunity, NICHD, NIH, Building 6, Room 436, Bethesda, MD 20892, USA.. robbinsj@nichd.nih.gov
SO Annals of the New York Academy of Sciences, (2004 Dec) Vol. 1038, pp. 49-59.
Journal code: 7506858. ISSN: 0077-8923.
CY United States
DT Journal; Article; (JOURNAL ARTICLE)
LA English
FS Priority Journals
EM 200511
ED Entered STN: 20 Apr 2005
Last Updated on STN: 10 Nov 2005
Entered Medline: 9 Nov 2005
AB Using published data and the results of our studies, we hypothesized that a critical level of serum IgG antibodies to the surface structures of invasive pathogens (capsular polysaccharides of Haemophilus influenzae type b, pneumococcus, meningococcus, Salmonella typhi, Escherichia coli, and Staphylococcus aureus, the O-specific polysaccharide LPS domain of the LPS of Shigella, non-typhoidal Salmonella, and E. coli, and the capsular polypeptide of Bacillus anthraces) confer immunity to these pathogens. Covalent attachment to a protein increases their immunogenicity and bestows T-cell properties to these antigens. We have also shown that a critical level of serum IgG antibodies to pertussis toxin alone induces immunity on both an individual and on a community basis (herd immunity) to Bordetella pertussis. It is likely that all the above conjugates and pertussis toxoid will be incorporated into vaccines for routine infant immunization.

L7 ANSWER 9 OF 10 BIOSIS on STN
DUPLICATE 4

AN 2003:478120 BIOSIS
DN PREV200300478120
TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of Bacillus anthracis: A potential addition to the anthrax vaccine.
AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
schneerr@mail.nih.gov
SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
ISSN: 0027-8424 (ISSN print).
DT Article
LA English
ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003
AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of Bacillus anthracis. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant B. anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin A (rEPA). To identify the optimal construct, conjugates of B. anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

L7 ANSWER 10 OF 10 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 5
AN 2002:429815 BIOSIS
DN PREV200200429815
TI Development of an improved vaccine for anthrax.
AU Leppla, Stephen H. [Reprint author]; Robbins, John B.; Schneerson, Rachel; Shiloach, Joseph
CS Oral Infection and Immunity Branch, NIDCR, 30 Convent Drive, Building 30, Room 303, Bethesda, MD, 20892-4350, USA
Leppla@nih.gov
SO Journal of Clinical Investigation, (July, 2002) Vol. 110, No. 2, pp. 141-144. print.
CODEN: JCINAO. ISSN: 0021-9738.
DT Article
LA English
ED Entered STN: 14 Aug 2002
Last Updated on STN: 14 Aug 2002

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=> e shiloach joseph/au
E1          579     SHILOACH J/AU
E2            5     SHILOACH J */AU
E3          230 --> SHILOACH JOSEPH/AU
E4           17     SHILOACH M/AU
E5            3     SHILOACH MIRA/AU
E6           31     SHILOACH Y/AU
E7            1     SHILOACH YOSHI/AU
E8            4     SHILOACH YOSSI/AU
E9            1     SHILOAH A/AU
E10          17     SHILOAH E/AU
E11           2     SHILOAH ELI/AU
E12           1     SHILOAH ELIAHOU/AU

=> s e1-e3 and anthra?
L8           36 ("SHILOACH J"/AU OR "SHILOACH J *"/AU OR "SHILOACH JOSEPH"/AU)
                AND ANTHRA?

=> dup rem l8
PROCESSING COMPLETED FOR L8
L9            9 DUP REM L8 (27 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 9 ANSWERS - CONTINUE? Y/(N):y

L9   ANSWER 1 OF 9  USPATFULL on STN
AN     2006:158613  USPATFULL
TI     Poly-gamma-glutamic conjugates for eliciting immune responses directed
       against bacilli
IN     Schneerson, Rachel, Bethesda, MD, UNITED STATES
       Leppla, Stephen, Bethesda, MD, UNITED STATES
       Robbins, John B., Chevy Chase, MD, UNITED STATES
         Shiloach, Joseph, Rockville, MD, UNITED STATES
       Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
       Liu, Darrell, Bethesda, MD, UNITED STATES
       Majadly, Fathy, Frederick, MD, UNITED STATES
PI     US 2006134143      A1   20060622
AI     US 2004-559825     A1   20040604 (10)
       WO 2004-US17736         20040604
                               20051202  PCT 371 date
PRAI   US 2003-476598P     20030605 (60)
DT     Utility
FS     APPLICATION
LREP   KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
       OR, 97204-2988, US
CLMN   Number of Claims: 36
ECL    Exemplary Claim: 1
DRWN   2 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB     Immunogenic compositions and methods for eliciting an immune response
       against B. anthracis and other bacilli are provided that
       include immunogenic conjugates of a poly-γ-glutamic acid
       (γPGA) polypeptide of B.  anthracis, or of another
       Bacillus that expresses a γPGA polypeptide. The γPGA
       conjugates elicit an effective immune response against B.
       anthracis, or against another Bacillus, in mammalian hosts to
       which the conjugates are administered.

L9   ANSWER 2 OF 9  BIOSIS  COPYRIGHT (c) 2006 The Thomson Corporation  on STN
     DUPLICATE 1
AN   2006:459046  BIOSIS
DN   PREV200600459246
```

TI Passive immunotherapy of Bacillus anthracis pulmonary infection in mice with antisera produced by DNA immunization.
AU Herrmann, John E. [Reprint Author]; Wang, Shixia; Zhang, Chuanyou; Panchal, Rekha G.; Bavari, Sina; Lyons, C. Rick; Lovchik, Julie A.; Golding, Basil; Shiloach, Joseph; Lu, Shan
CS Antibody Sci Inc, 80 Webster St, Worcester, MA 01603 USA
ASI@AbScience.com
SO Vaccine, (JUL 26 2006) Vol. 24, No. 31-32, pp. 5872-5880.
CODEN: VACCDE. ISSN: 0264-410X.
DT Article
LA English
ED Entered STN: 13 Sep 2006
Last Updated on STN: 13 Sep 2006
AB Because of the high failure rate of antibiotic treatment in patients with anthrax there is a need for additional therapies such as passive immunization with therapeutic antibodies. In this study, we used codon-optimized plasmid DNAs (DNA vaccines) encoding Bacillus anthracis protective antigen (PA) to immunize rabbits for producing anti-anthrax antibodies for use in passive immunotherapy. The antisera generated with these DNA vaccines were of high titer as measured by ELISA. The antisera were also able to protect J774 macrophage cells by neutralizing the cytotoxic effect of exogenously added anthrax lethal toxin, and of the toxin released by B. anthracis (Sterne strain) spores following infection. In addition, the antisera passively protected mice against pulmonary challenge with an approximate 50 LD50 dose of B. anthracis (Sterne strain) spores. The protection in mice was obtained when the antiserum was given 1 h before or 1 h after challenge. We further demonstrated that IgG and F(ab')(2) components purified from anti-PA rabbit hyperimmune sera retained similar levels of neutralizing activities against both exogenously added B. anthracis lethal toxin and toxin produced by B. anthracis (Sterne strain) spores. The high titer antisera we produced will enable an immunization strategy to supplement antibiotic therapy for improving the survival of patients with anthrax.

L9 ANSWER 3 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1314018 CAPLUS
DN 144:35300
TI Methods for preparing immunogenic conjugates for use in vaccines
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph
PA The Government of the United States of America as Represented by the Secretary, Department of Healthand Human Services, USA
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005117965	A1	20051215	WO 2005-US19678	20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

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     WO 2005000884         A1    20050106    WO 2004-US17736        20040604
     WO 2005000884         C1    20051006
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
             CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
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             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
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             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
     US 2005271675         A1    20051208    US 2004-5851           20041206
PRAI WO 2004-US17736       A     20040604
     US 2004-5851          A     20041206
     US 2003-476598P       P     20030605
OS   MARPAT 144:35300
AB   Methods for making an immunogenic conjugate that includes a hapten or an
     antigen covalently linked to a carrier are discussed. The methods include
     reacting a first agent with a dihydrazide resulting in a
     hydrazino-modified first agent, wherein the first agent is a hapten, an
     antigen or a carrier; reacting a second agent with a benzaldehyde compound
     resulting in a benzaldehyde-modified second agent, wherein the second
     agent is a hapten, an antigen or a carrier, provided that the first agent
     or the second agent is a carrier; and reacting the hydrazine-modified
     first agent with the benzaldehyde-modified second agent resulting in an
     immunogenic conjugate comprising a hapten or an antigen covalently linked
     to a carrier via a hydrazone linkage. The examples discuss the
     conjugation of Bacillus poly-γ-glutamic acids to carriers such as
     bovine serum albumin, Bacillus anthracis protective antigen, and
     Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce
     IgG and opsonophagocytosis.
RE.CNT  4     THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9   ANSWER 4 OF 9  CAPLUS  COPYRIGHT 2006 ACS on STN
AN   2005:14426  CAPLUS
DN   142:112426
TI   Bacillus capsular poly-γ-glutamic acid conjugates for eliciting
     immune responses against Bacillus infection
IN   Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach,
     Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
PA   United States Dept. of Health and Human Services, USA
SO   PCT Int. Appl., 67 pp.
     CODEN: PIXXD2
DT   Patent
LA   English
FAN.CNT 3
     PATENT NO.            KIND   DATE        APPLICATION NO.        DATE
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PI   WO 2005000884         A1     20050106    WO 2004-US17736        20040604
     WO 2005000884         C1     20051006
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
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             GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
             LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
             NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY,
             TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
         RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
             AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
             EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
             SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
             SN, TD, TG
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AU 2004252091 A1 20050106 AU 2004-252091 20040604
CA 2528067 AA 20050106 CA 2004-2528067 20040604
EP 1633778 A1 20060315 EP 2004-754360 20040604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
US 2005271675 A1 20051208 US 2004-5851 20041206
WO 2005117965 A1 20051215 WO 2005-US19678 20050603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2006134143 A1 20060622 US 2005-559825 20051202
PRAI US 2003-476598P P 20030605
WO 2004-US17736 W 20040604
US 2004-5851 A 20041206

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ-D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ-D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L9 ANSWER 5 OF 9 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 2004:331575 CAPLUS
DN 140:338027
TI Methods for preparing Bacillus anthracis protective antigen for use in vaccines
IN Shiloach, Joseph; Leppla, Stephen H.; Ramirez, Delia M.; Schneerson, Rachel; Robbins, John B.
PA USA
SO U.S. Pat. Appl. Publ., 13 pp.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2004076638	A1	20040422	US 2002-290712	20021108
PRAI US 2001-344505P	P	20011109		

AB The authors disclose improved methods of producing and recovering B. anthracis protective antigen (PA), especially modified PA which is protease resistant, and to methods of using of these PAs or nucleic acids encoding these PAs for eliciting an immunogenic response.

L9 ANSWER 6 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN

DUPLICATE 3
AN 2004:149774 BIOSIS
DN PREV200400153906
TI Treatment of anthrax infection with combination of ciprofloxacin and antibodies to protective antigen of Bacillus anthracis.
AU Karginov, Vladimir A. [Reprint Author]; Robinson, Tanisha M.; Riemenschneider, Jenny; Golding, Basil; Kennedy, Michael; Shiloach, Joseph; Alibek, Ken
CS Advanced Biosystems, Inc., 10900 University Blvd., Manassas, VA, 20110, USA
vladimir.karginov@analex.com
SO FEMS Immunology and Medical Microbiology, (15 January 2004) Vol. 40, No. 1, pp. 71-74. print.
ISSN: 0928-8244 (ISSN print).
DT Article
LA English
ED Entered STN: 17 Mar 2004
Last Updated on STN: 17 Mar 2004
AB Currently there is no effective treatment for inhalational anthrax beyond administration of antibiotics shortly after exposure. There is need for new, safe and effective treatments to supplement traditional antibiotic therapy. Our study was based on the premise that simultaneous inhibition of lethal toxin action with antibodies and blocking of bacterial growth by antibiotics will be beneficial for the treatment of anthrax. In this study, we tested the effects of a combination treatment using purified rabbit or sheep anti-protective antigen (PA) antibodies and the antibiotic ciprofloxacin in a rodent anthrax model. In mice infected with a dose of Bacillus anthracis Sterne strain corresponding to 10 LD50, antibiotic treatment with ciprofloxacin alone only cured 50% of infected animals. Administration of anti-PA IgG in combination with ciprofloxacin produced 90-100% survival. These data indicate that a combination of antibiotic/immunoglobulin therapy is more effective than antibiotic treatment alone in a rodent anthrax model.

L9 ANSWER 7 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 4
AN 2003:478120 BIOSIS
DN PREV200300478120
TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of Bacillus anthracis: A potential addition to the anthrax vaccine.
AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
schneerr@mail.nih.gov
SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
ISSN: 0027-8424 (ISSN print).
DT Article
LA English
ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003
AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of Bacillus anthracis. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant B.

anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin A (rEPA). To identify the optimal construct, conjugates of B. anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

L9 ANSWER 8 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 5
AN 2002:281740 BIOSIS
DN PREV200200281740
TI Production, recovery and immunogenicity of the protective antigen from a recombinant strain of Bacillus anthracis.
AU Ramirez, D. M.; Leppla, S. H.; Schneerson, R.; Shiloach, J. [Reprint author]
CS Biotechnology Unit, LCDB, NIDDK, National Institutes of Health (NIH), Bethesda, MD, 20892, USA
SO Journal of Industrial Microbiology and Biotechnology, (April, 2002) Vol. 28, No. 4, pp. 232-238. print.
ISSN: 1367-5435.
DT Article
LA English
ED Entered STN: 8 May 2002
Last Updated on STN: 8 May 2002
AB The protective antigen (PA) is one of the three components of the anthrax toxin. It is a secreted nontoxic protein with a molecular weight of 83 kDa and is the major component of the currently licensed human vaccine for anthrax. Due to limitations found in the existing vaccine formulation, it has been proposed that genetically modified PA may be more effective as a vaccine. The expression and the stability of two recombinant PA (rPA) variants, PA-SNKE-DELTAFF-E308D and PA-N657A, were studied. These proteins were expressed in the nonsporogenic avirulent strain BH445. Initial results indicated that PA-SNKE-DELTAFF-E308D, which lacks two proteolysis-sensitive sites, is more stable than PA-N657A. Process development was conducted to establish an efficient production and purification process for PA-SNKE-DELTAFF-E308D. pH, media composition, growth strategy and protease inhibitors composition were analyzed. The production process chosen was based on batch growth of B. anthracis using tryptone and yeast extract as the only source of carbon, pH control at 7.5, and antifoam 289. Optimal harvest time was 14-18 h after inoculation, and EDTA (5 mM) was added upon harvest for proteolysis control. Recovery of the rPA was performed by expanded-bed adsorption (EBA) on a hydrophobic interaction chromatography (HIC) resin, eliminating the need for centrifugation, microfiltration and diafiltration. The EBA step was followed by ion exchange and gel filtration. rPA yields before and after purification were 130 and 90 mg/l, respectively. The purified rPA, without further treatment, treated with small amounts of formalin or adsorbed on alum, induced, high levels of IgG anti-PA with neutralization activities.

L9 ANSWER 9 OF 9 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 6

```
AN   2002:429815  BIOSIS
DN   PREV200200429815
TI   Development of an improved vaccine for anthrax.
AU   Leppla, Stephen H. [Reprint author]; Robbins, John B.; Schneerson, Rachel;
     Shiloach, Joseph
CS   Oral Infection and Immunity Branch, NIDCR, 30 Convent Drive, Building 30,
     Room 303, Bethesda, MD, 20892-4350, USA
     Leppla@nih.gov
SO   Journal of Clinical Investigation, (July, 2002) Vol. 110, No. 2, pp.
     141-144. print.
     CODEN: JCINAO. ISSN: 0021-9738.
DT   Article
LA   English
ED   Entered STN: 14 Aug 2002
     Last Updated on STN: 14 Aug 2002


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E2           39     KUBLER KIELB J/AU
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E5            1     KUBLER KRAUER/AU
E6            1     KUBLER KRISZTINA/AU
E7          223     KUBLER L/AU
E8            1     KUBLER L F/AU
E9            1     KUBLER LUC/AU
E10           2     KUBLER LUCIEN/AU
E11          44     KUBLER M/AU
E12           2     KUBLER M C K/AU

=> s e2-e3 and anthra?
L10          17 ("KUBLER KIELB J"/AU OR "KUBLER KIELB JOANNA"/AU) AND ANTHRA?

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PROCESSING COMPLETED FOR L10
L11            6 DUP REM L10 (11 DUPLICATES REMOVED)

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YOU HAVE REQUESTED DATA FROM 6 ANSWERS - CONTINUE? Y/(N):y


L11  ANSWER 1 OF 6  USPATFULL on STN
AN     2006:158613  USPATFULL
TI     Poly-gamma-glutamic conjugates for eliciting immune responses directed
       against bacilli
IN     Schneerson, Rachel, Bethesda, MD, UNITED STATES
       Leppla, Stephen, Bethesda, MD, UNITED STATES
       Robbins, John B., Chevy Chase, MD, UNITED STATES
       Shiloach, Joseph, Rockville, MD, UNITED STATES
         Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
       Liu, Darrell, Bethesda, MD, UNITED STATES
       Majadly, Fathy, Frederick, MD, UNITED STATES
PI     US 2006134143      A1   20060622
AI     US 2004-559825     A1   20040604 (10)
       WO 2004-US17736         20040604
                               20051202  PCT 371 date
PRAI   US 2003-476598P     20030605 (60)
DT     Utility
FS     APPLICATION
LREP   KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND,
       OR, 97204-2988, US
CLMN   Number of Claims: 36
ECL    Exemplary Claim: 1
```

DRWN 2 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Immunogenic compositions and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptide of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered.

L11 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN DUPLICATE 1
AN 2006:436213 BIOSIS
DN PREV200600430224
TI Additional conjugation methods and immunogenicity of Bacillus anthracis poly-gamma-D-glutarnic acid-protein conjugates.
AU Kubler-Kielb, Joanna [Reprint Author]; Liu, Teh-Yung; Mocca, Christopher; Majadly, Fathy; Robbins, John B.; Schneerson, Rachel
CS NICHD, NIH, LDMI, 9000 Rockville Pike,Bldg 6,Rm 1A05, Bethesda, MD 20892 USA
kielbj@mail.nih.gov
SO Infection and Immunity, (AUG 2006) Vol. 74, No. 8, pp. 4744-4749. CODEN: INFIBR. ISSN: 0019-9567.
DT Article
LA English
ED Entered STN: 30 Aug 2006
Last Updated on STN: 30 Aug 2006
AB The capsule of Bacillus anthracis, composed of poly-gamma-D-glutamic acid (gamma DPGA), is an essential virulence factor of B. anthracis. The capsule inhibits innate host defense through its antiphagocytic action. gamma DPGA is a poor immunogen, but when covalently bound to a carrier protein, it elicits serum antibodies. To identify the optimal construct for clinical use, synthetic gamma DPGAs of different lengths were bound to carrier proteins at different densities. The advantages of the synthetic over the natural polypeptide are the homogeneous chain length and end groups, allowing conjugates to be accurately characterized and standardized and their chemical compositions to be related to their immunogenicities. In the present study, we evaluated, in addition to methods reported by us, hydrazone, oxime, and thioether linkages between gamma DPGA and several proteins, including bovine serum albumin, recombinant Pseudomonas aeruginosa exotoxin A, recombinant B. anthracis protective antigen (rPA), and tetanus toxoid (TT). The effects of the dosage and formulation on the immunogenicities of the conjugates were evaluated in mice. All conjugates were immunogenic. The optimal gamma DPGA chain length of 10 to 15 amino acids and the density, an average of 15 mol gamma DPGA per mol of protein, were confirmed. The thioether bond was the optimal linkage type, and TT and rPA were the best carriers. The optimal dosage was 1.2 to 2.5 mu g of gamma DPGA per mouse, and adsorption of the conjugates onto aluminum hydroxide significantly increased the antibody response to the protein with a lesser effect on anti-gamma DPGA levels.

L11 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 2005:1294042 CAPLUS
DN 144:35295
TI Hydrazone conjugates of haptens and antigens
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
PA United States Dept. of Health and Human Services, USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736. CODEN: USXXCO
DT Patent

LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
	W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
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PRAI	WO 2004-US17736	A2	20040604		
	US 2003-476598P	P	20030605		
	US 2004-5851	A	20041206		

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L11 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1314018 CAPLUS
DN 144:35300
TI Methods for preparing immunogenic conjugates for use in vaccines
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph
PA The Government of the United States of America as Represented by the Secretary, Department of Healthand Human Services, USA
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

WO 2005000884 A1 20050106 WO 2004-US17736 20040604
WO 2005000884 C1 20051006
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,
CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD,
GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI,
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TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE,
SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE,
SN, TD, TG

US 2005271675 A1 20051208 US 2004-5851 20041206
PRAI WO 2004-US17736 A 20040604
US 2004-5851 A 20041206
US 2003-476598P P 20030605
OS MARPAT 144:35300
AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ-glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14426 CAPLUS
DN 142:112426
TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection
IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH,

CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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AU 2004252091	A1	20050106	AU 2004-252091		20040604
CA 2528067	AA	20050106	CA 2004-2528067		20040604
EP 1633778	A1	20060315	EP 2004-754360		20040604

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK

US 2005271675	A1	20051208	US 2004-5851	20041206
WO 2005117965	A1	20051215	WO 2005-US19678	20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

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US 2006134143	A1	20060622	US 2005-559825		20051202
PRAI US 2003-476598P	P	20030605			
WO 2004-US17736	W	20040604			
US 2004-5851	A	20041206			

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ-D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ-D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L11 ANSWER 6 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 3
AN 2003:478120 BIOSIS
DN PREV200300478120
TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of Bacillus anthracis: A potential addition to the anthrax vaccine.
AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
schneerr@mail.nih.gov

SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print. ISSN: 0027-8424 (ISSN print).
DT Article
LA English
ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003
AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of Bacillus anthracis. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant B. anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin A (rEPA). To identify the optimal construct, conjugates of B. anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

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E2            1     LIU DARREL T/AU
E3            2 --> LIU DARRELL/AU
E4            8     LIU DARRELL T/AU
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E9           42     LIU DASHAN/AU
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E12           1     LIU DASHUN/AU

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PROCESSING COMPLETED FOR L12
L13           4 DUP REM L12 (1 DUPLICATE REMOVED)

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L13  ANSWER 1 OF 4  USPATFULL on STN
AN     2006:158613  USPATFULL
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TI Poly-gamma-glutamic conjugates for eliciting immune responses directed against bacilli
IN Schneerson, Rachel, Bethesda, MD, UNITED STATES
Leppla, Stephen, Bethesda, MD, UNITED STATES
Robbins, John B., Chevy Chase, MD, UNITED STATES
Shiloach, Joseph, Rockville, MD, UNITED STATES
Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
Liu, Darrell, Bethesda, MD, UNITED STATES
Majadly, Fathy, Frederick, MD, UNITED STATES
PI US 2006134143 A1 20060622
AI US 2004-559825 A1 20040604 (10)
WO 2004-US17736 20040604
20051202 PCT 371 date
PRAI US 2003-476598P 20030605 (60)
DT Utility
FS APPLICATION
LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND, OR, 97204-2988, US
CLMN Number of Claims: 36
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Immunogenic compositions and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptide of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered.

L13 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 1
AN 2005:1294042 CAPLUS
DN 144:35295
TI Hydrazone conjugates of haptens and antigens
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
PA United States Dept. of Health and Human Services, USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI US 2005271675	A1	20051208	US 2004-5851	20041206
WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		

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WO 2005117965	A1	20051215	WO 2005-US19678	20050603

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RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG

PRAI WO 2004-US17736 A2 20040604
US 2003-476598P P 20030605
US 2004-5851 A 20041206

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L13 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1314018 CAPLUS
DN 144:35300
TI Methods for preparing immunogenic conjugates for use in vaccines
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph
PA The Government of the United States of America as Represented by the Secretary, Department of Healthand Human Services, USA
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI WO 2005117965	A1	20051215	WO 2005-US19678	20050603

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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WO 2005000884	A1	20050106	WO 2004-US17736	20040604
WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
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SN, TD, TG

	US 2005271675	A1	20051208	US 2004-5851	20041206
PRAI	WO 2004-US17736	A	20040604		
	US 2004-5851	A	20041206		
	US 2003-476598P	P	20030605		

OS MARPAT 144:35300

AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ-glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.

RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L13 ANSWER 4 OF 4 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14426 CAPLUS
DN 142:112426
TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection
IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
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	AU 2004252091	A1	20050106	AU 2004-252091	20040604
	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604
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	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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            EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
            RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
            MR, NE, SN, TD, TG
    US 2006134143        A1    20060622    US 2005-559825         20051202
PRAI US 2003-476598P     P     20030605
    WO 2004-US17736      W     20040604
    US 2004-5851         A     20041206
AB  Immunogenic compns. and methods for eliciting an immune response against
    B. anthracis and other bacilli are provided that include
    immunogenic conjugates of a poly-γ-glutamic acid (γPGA)
    polypeptides of B. anthracis, or of another Bacillus that
    expresses a γPGA polypeptide.  The γPGA conjugates elicit an
    effective immune response against B. anthracis, or against
    another Bacillus, in mammalian hosts to which the conjugates are
    administered.  The conjugate consists of γ-D-PGA and carrier
    selected from bovine serum albumin, recombinant Bacillus protective
    antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid,
    diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid,
    HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin,
    edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or
    combination of two or more.  The preferred conjugate consists of
    γ-D-PGA and Bacillus protective antigen.
RE.CNT  9     THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT


=> e majadly fathy/au
E1          17     MAJADLY F/AU
E2          10     MAJADLY F D/AU
E3          16 --> MAJADLY FATHY/AU
E4           2     MAJADLY FATHY D/AU
E5          55     MAJADO M/AU
E6           3     MAJADO M A/AU
E7          79     MAJADO M J/AU
E8           3     MAJADO M JULIANA/AU
E9           1     MAJADO MARIA E/AU
E10          3     MAJADO MARIA J/AU
E11          3     MAJADO MARIA JULIANA/AU
E12          1     MAJADO MARTINEZ J/AU

=> s e1-e4 and anthra?
L14         17 ("MAJADLY F"/AU OR "MAJADLY F D"/AU OR "MAJADLY FATHY"/AU OR
               "MAJADLY FATHY D"/AU) AND ANTHRA?

=> dup rem l14
PROCESSING COMPLETED FOR L14
L15            6 DUP REM L14 (11 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 6 ANSWERS - CONTINUE? Y/(N):y

L15  ANSWER 1 OF 6  USPATFULL on STN
AN     2006:158613  USPATFULL
TI     Poly-gamma-glutamic conjugates for eliciting immune responses directed
       against bacilli
IN     Schneerson, Rachel, Bethesda, MD, UNITED STATES
       Leppla, Stephen, Bethesda, MD, UNITED STATES
       Robbins, John B., Chevy Chase, MD, UNITED STATES
       Shiloach, Joseph, Rockville, MD, UNITED STATES
       Kubler-Kielb, Joanna, Rockville, MD, UNITED STATES
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Liu, Darrell, Bethesda, MD, UNITED STATES
Majadly, Fathy, Frederick, MD, UNITED STATES
PI US 2006134143 A1 20060622
AI US 2004-559825 A1 20040604 (10)
WO 2004-US17736 20040604
20051202 PCT 371 date
PRAI US 2003-476598P 20030605 (60)
DT Utility
FS APPLICATION
LREP KLARQUIST SPARKMAN, LLP, 121 S.W. SALMON STREET, SUITE #1600, PORTLAND, OR, 97204-2988, US
CLMN Number of Claims: 36
ECL Exemplary Claim: 1
DRWN 2 Drawing Page(s)
LN.CNT 2866
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Immunogenic compositions and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptide of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered.

L15 ANSWER 2 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 1
AN 2006:436213 BIOSIS
DN PREV200600430224
TI Additional conjugation methods and immunogenicity of Bacillus anthracis poly-gamma-D-glutarnic acid-protein conjugates.
AU Kubler-Kielb, Joanna [Reprint Author]; Liu, Teh-Yung; Mocca, Christopher; Majadly, Fathy; Robbins, John B.; Schneerson, Rachel
CS NICHD, NIH, LDMI, 9000 Rockville Pike,Bldg 6,Rm 1A05, Bethesda, MD 20892 USA
kielbj@mail.nih.gov
SO Infection and Immunity, (AUG 2006) Vol. 74, No. 8, pp. 4744-4749.
CODEN: INFIBR. ISSN: 0019-9567.
DT Article
LA English
ED Entered STN: 30 Aug 2006
Last Updated on STN: 30 Aug 2006
AB The capsule of Bacillus anthracis, composed of poly-gamma-D-glutamic acid (gamma DPGA), is an essential virulence factor of B. anthracis. The capsule inhibits innate host defense through its antiphagocytic action. gamma DPGA is a poor immunogen, but when covalently bound to a carrier protein, it elicits serum antibodies. To identify the optimal construct for clinical use, synthetic gamma DPGAs of different lengths were bound to carrier proteins at different densities. The advantages of the synthetic over the natural polypeptide are the homogeneous chain length and end groups, allowing conjugates to be accurately characterized and standardized and their chemical compositions to be related to their immunogenicities. In the present study, we evaluated, in addition to methods reported by us, hydrazone, oxime, and thioether linkages between gamma DPGA and several proteins, including bovine serum albumin, recombinant Pseudomonas aeruginosa exotoxin A, recombinant B. anthracis protective antigen (rPA), and tetanus toxoid (TT). The effects of the dosage and formulation on the immunogenicities of the conjugates were evaluated in mice. All conjugates were immunogenic. The optimal gamma DPGA chain length of 10 to 15 amino acids and the density, an average of 15 mol gamma DPGA per mol of protein, were confirmed. The thioether bond was the optimal linkage type, and TT and rPA were the best carriers. The optimal dosage was 1.2 to 2.5 mu g of gamma DPGA per mouse, and adsorption of the conjugates onto aluminum

hydroxide significantly increased the antibody response to the protein with a lesser effect on anti-gamma DPGA levels.

L15 ANSWER 3 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN DUPLICATE 2
AN 2005:1294042 CAPLUS
DN 144:35295
TI Hydrazone conjugates of haptens and antigens
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy; Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloah, Joseph
PA United States Dept. of Health and Human Services, USA
SO U.S. Pat. Appl. Publ., 17 pp., Cont.-in-part of Appl. No. PCT/US04/017736.
CODEN: USXXCO
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
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	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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PRAI	WO 2004-US17736	A2	20040604		
	US 2003-476598P	P	20030605		
	US 2004-5851	A	20041206		

AB The authors disclose methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage.

L15 ANSWER 4 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:1314018 CAPLUS
DN 144:35300
TI Methods for preparing immunogenic conjugates for use in vaccines
IN Schneerson, Rachel; Kubler-Kielb, Joanna; Majadly, Fathy;

Leppla, Stephen H.; Robbins, John B.; Liu, Darrell T.; Shiloach, Joseph
PA The Government of the United States of America as Represented by the Secretary, Department of Healthand Human Services, USA
SO PCT Int. Appl., 53 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
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PRAI	WO 2004-US17736	A	20040604		
	US 2004-5851	A	20041206		
	US 2003-476598P	P	20030605		

OS MARPAT 144:35300
AB Methods for making an immunogenic conjugate that includes a hapten or an antigen covalently linked to a carrier are discussed. The methods include reacting a first agent with a dihydrazide resulting in a hydrazino-modified first agent, wherein the first agent is a hapten, an antigen or a carrier; reacting a second agent with a benzaldehyde compound resulting in a benzaldehyde-modified second agent, wherein the second agent is a hapten, an antigen or a carrier, provided that the first agent or the second agent is a carrier; and reacting the hydrazine-modified first agent with the benzaldehyde-modified second agent resulting in an immunogenic conjugate comprising a hapten or an antigen covalently linked to a carrier via a hydrazone linkage. The examples discuss the conjugation of Bacillus poly-γ-glutamic acids to carriers such as bovine serum albumin, Bacillus anthracis protective antigen, and Pseudomonas aeruginosa exotoxin A. The conjugates were shown to induce IgG and opsonophagocytosis.
RE.CNT 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD
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L15 ANSWER 5 OF 6 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14426 CAPLUS
DN 142:112426
TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection

IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy

PA United States Dept. of Health and Human Services, USA

SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2

DT Patent

LA English

FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		
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	AU 2004252091	A1	20050106	AU 2004-252091	20040604
	CA 2528067	AA	20050106	CA 2004-2528067	20040604
	EP 1633778	A1	20060315	EP 2004-754360	20040604
	R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK				
	US 2005271675	A1	20051208	US 2004-5851	20041206
	WO 2005117965	A1	20051215	WO 2005-US19678	20050603
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	US 2006134143	A1	20060622	US 2005-559825	20051202
PRAI	US 2003-476598P	P	20030605		
	WO 2004-US17736	W	20040604		
	US 2004-5851	A	20041206		

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ-D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ-D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L15 ANSWER 6 OF 6 BIOSIS COPYRIGHT (c) 2006 The Thomson Corporation on STN
DUPLICATE 3
AN 2003:478120 BIOSIS
DN PREV200300478120
TI Poly(gamma-D-glutamic acid) protein conjugates induce IgG antibodies in mice to the capsule of Bacillus anthracis: A potential addition to the anthrax vaccine.
AU Schneerson, Rachel [Reprint Author]; Kubler-Kielb, Joanna; Liu, Teh-Yung; Dai, Zhong-Dong; Leppla, Stephen H.; Yergey, Alfred; Backlund, Peter; Shiloach, Joseph; Majadly, Fathy; Robbins, John B.
CS National Institute of Child Health and Human Development, National Institutes of Health, Bethesda, MD, 20892, USA
schneerr@mail.nih.gov
SO Proceedings of the National Academy of Sciences of the United States of America, (July 22 2003) Vol. 100, No. 15, pp. 8945-8950. print.
ISSN: 0027-8424 (ISSN print).
DT Article
LA English
ED Entered STN: 15 Oct 2003
Last Updated on STN: 15 Oct 2003
AB Both the protective antigen (PA) and the poly(gamma-D-glutamic acid) capsule(gammaDPGA) are essential for the virulence of Bacillus anthracis. A critical level of vaccine-induced IgG anti-PA confers immunity to anthrax, but there is no information about the protective action of IgG anti-gammaDPGA. Because the number of spores presented by bioterrorists might be greater than encountered in nature, we sought to induce capsular antibodies to expand the immunity conferred by available anthrax vaccines. The nonimmunogenic gammaDPGA or corresponding synthetic peptides were bound to BSA, recombinant B. anthracis PA (rPA), or recombinant Pseudomonas aeruginosa exotoxin A (rEPA). To identify the optimal construct, conjugates of B. anthracis gammaDPGA, Bacillus pumilus gammaDLPGA, and peptides of varying lengths (5-, 10-, or 20-mers), of the D or L configuration with active groups at the N or C termini, were bound at 5-32 mol per protein. The conjugates were characterized by physico-chemical and immunological assays, including GLC-MS and matrix-assisted laser desorption ionization time-of-flight spectrometry, and immunogenicity in 5- to 6-week-old mice. IgG anti-gammaDPGA and antiprotein were measured by ELISA. The highest levels of IgG anti-gammaDPGA were elicited by decamers of gammaDPGA at 10-20 mol per protein bound to the N- or C-terminal end. High IgG anti-gammaDPGA levels were elicited by two injections of 2.5 mug of gammaDPGA per mouse, whereas three injections were needed to achieve high levels of protein antibodies. rPA was the most effective carrier. Anti-gammaDPGA induced opsonophagocytic killing of B. anthracis tox-, cap+. gammaDPGA conjugates may enhance the protection conferred by PA alone. gammaDPGA-rPA conjugates induced both anti-PA and anti-gammaDPGA.

=> s conjugate? and ?PGA
'?PGA' NOT LONG ENOUGH FOR LEFT TRUNCATION
You have entered a truncated stem whose length is less than
the minimum allowed for left truncation in the requested
search field. You may increase the length of the stem to
the minimum allowed and try again. Enter HELP SFIELDS to
to find the minimum stem length for left truncation in
the requested search field.

=> s conjugate? and (poly glutamic acid?) and (anthrax or anthracis)
L16 22 CONJUGATE? AND (POLY GLUTAMIC ACID?) AND (ANTHRAX OR ANTHRACIS)

=> dup rem l16
PROCESSING COMPLETED FOR L16
L17 22 DUP REM L16 (0 DUPLICATES REMOVED)

=> d bib ab 1-
YOU HAVE REQUESTED DATA FROM 22 ANSWERS - CONTINUE? Y/(N):y

L17 ANSWER 1 OF 22 USPATFULL on STN
AN 2006:166354 USPATFULL
TI Drug pre-targeting by means of bi-specific antibodies and hapten constructs comprising a carrier peptide and the active agent(s)
IN Goldenberg, David M, Mendham, NJ, UNITED STATES
Hansen, Hans J, Picayune, NJ, UNITED STATES
Leung, Shui-on, Hong Kong, CHINA
McBride, William J, Boonton, NJ, UNITED STATES
Gu, Zhengxing, Warren, NJ, UNITED STATES
PA Immunomedics, Inc., Morris Plains, NJ, UNITED STATES (U.S. corporation)
PI US 2006140858 A1 20060629
AI US 2003-514632 A1 20030516 (10)
WO 2003-GB2110 20030516
20050912 PCT 371 date
PRAI US 2002-10150654 20020517
DT Utility
FS APPLICATION
LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1717 RHODE ISLAND AVE, NW, WASHINGTON, DC, 20036-3001, US
CLMN Number of Claims: 127
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 4528
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to targetable constructs which may be bound by a bi-specific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds the targetable construct. The targetable construct comprises a carrier portion which comprises or bears at least one epitope recognizable by at least one arm of said bi-specific antibody or antibody fragment. The targetable construct further comprises one or more therapeutic or diagnostic agents or enzymes. The invention provides constructs and methods for producing the targetable constructs and bi-specific antibodies or antibody fragments, as well as methods for using them.

L17 ANSWER 2 OF 22 USPATFULL on STN
AN 2006:40112 USPATFULL
TI Production and use of novel peptide-based agents with bispecific antibodies
IN Goldenberg, David M., Mendham, NJ, UNITED STATES
Hansen, Hans J., Picayune, MS, UNITED STATES
Leung, Shui-on, Madison, NJ, UNITED STATES
McBride, William J., Boonton, NJ, UNITED STATES
Qu, Zhengxing, Warren, NJ, UNITED STATES
PA Immunomedics, Inc., Morris Plains, NJ, UNITED STATES (U.S. corporation)
PI US 2006034759 A1 20060216
AI US 2005-198846 A1 20050808 (11)
RLI Division of Ser. No. US 2002-150654, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 1999-382186, filed on 23 Aug 1999, PENDING Continuation-in-part of Ser. No. US 2001-823746, filed on 3 Apr 2001, GRANTED, Pat. No. US 6962702 Continuation-in-part of Ser. No. US 1999-337756, filed on 22 Jun 1999, PENDING Continuation-in-part of Ser. No. US 1999-337756, filed on 22 Jun 1999, PENDING
PRAI US 1998-104156P 19981014 (60)
US 1998-90142P 19980622 (60)
DT Utility
FS APPLICATION
LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1717 RHODE ISLAND AVE, NW, WASHINGTON, DC, 20036-3001, US

CLMN Number of Claims: 95
ECL Exemplary Claim: 1-33
DRWN 7 Drawing Page(s)
LN.CNT 4591
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a bi-specific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable construct. The targetable construct comprises a carrier portion which comprises or bears at least one epitope recognizable by at least one arm of said bi-specific antibody or antibody fragment. The targetable construct further comprises one or more therapeutic or diagnostic agents or enzymes. The invention provides constructs and methods for producing the bi-specific antibodies or antibody fragments, as well as methods for using them.

L17 ANSWER 3 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2006:452992 CAPLUS
TI An intranasal vaccine targeting both the Bacillus anthracis toxin and bacterium provides protection against aerosol spore challenge in rabbits
AU Wimer-Mackin, S.; Hinchcliffe, M.; Petrie, C. R.; Warwood, S. J.; Tino, W. T.; Williams, M. S.; Stenz, J. P.; Cheff, A.; Richardson, C.
CS LigoCyte Pharmaceuticals Inc., Bozeman, MT, 59718, USA
SO Vaccine (2006), 24(18), 3953-3963
CODEN: VACCDE; ISSN: 0264-410X
PB Elsevier B.V.
DT Journal
LA English
AB An intranasal vaccine targeting the Bacillus anthracis toxin and vegetative bacterium was tested for the ability to protect immunized rabbits against aerosol B. anthracis spore exposure. Rabbits were vaccinated intranasally with PA-based vaccines formulated as dry powders with or without chitosan (ChiSys®, Archimedes Development Limited), a compound that exhibits muco-adhesive properties, or as a liquid Formulations also contained MPL adjuvant and PA. Some vaccines contained PA conjugated to a 10-mer peptide of the poly--glutamic acid capsule of B. anthracis.
Rabbits were immunized on days 0 and 28 and aerosol challenged with an average 250 LD50 Ames spores on day 85. Serum antibody was measured before and after challenge. Significant anti-PA serum IgG levels were obtained, particularly with use of ChiSys® based formulations. PA-Conj induced significant anti-capsule responses, although a formulation containing free capsule peptide did not. All immunized rabbits survived the challenge, but differences in morbidity, as evidenced by anorexia, between vaccine groups were observed Only rabbits immunized with PA + PA-Conj appeared normal throughout the post-challenge observation period (14 days), while all that received PA with the free capsule peptide appeared ill at times as evidenced by a failure to eat normally. One neg. control rabbit received a lower inhaled spore dose (183 LD50) and survived the challenge, although it was anorexic post-challenge. It also had a high level of anti-LF antibodies in its convalescent serum (5400 U/mL), indicating an extensive infection. In contrast, 75% of the immunized rabbits had no LF-specific antibody in their post-challenge sera, and the rest had low levels (≤138 U/mL), indicating that infections resulting in toxin production were avoided or greatly reduced. Thus, intranasal immunization with a chitosan-based powder vaccine combining PA and capsule epitopes provided superior protection against B. anthracis infection compared to a single antigen (PA) vaccine, as evidenced by a reduction in morbidity and prevention of death.
RE.CNT 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 4 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN

AN 2005:76327 CAPLUS
DN 142:175358
TI Anthrax conjugate vaccine induces antibodies to both bacilli and anthrax toxins
IN Wang, Julia Y.; Mekalanos, John; Rhie, Gi-Eun; Collier, John R.
PA President and Fellows of Harvard College, USA; The Brigham and Women's Hospital, Inc.
SO PCT Int. Appl., 29 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005007804	A2	20050127	WO 2004-US10933	20040409
	WO 2005007804	A3	20050909		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

PRAI US 2003-461406P P 20030410
AB The present invention is directed to immunogenic conjugates comprised of poly-γ-D-glutamic acid (PGA) covalently bound to protective antigen (PA). The invention includes methods for making conjugates, vaccines in which they are present, and methods for immunizing individuals in which they are used. Conjugation produces a synergistic effect dramatically increasing the response of animals to both the PGA and PA components of the conjugate. Antibodies to PGA and PA confer protection against both bacilli and anthrax toxins. The PGA for the vaccine is purified from B. licheniformis and the recombinant PA was expressed in E. coli and purified before the synthesis of the vaccine conjugate. Also prepared was a PGA-hepatitis B core protein conjugate.

L17 ANSWER 5 OF 22 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14426 CAPLUS
DN 142:112426
TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection
IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2005000884	A1	20050106	WO 2004-US17736	20040604
	WO 2005000884	C1	20051006		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW

RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

AU 2004252091 A1 20050106 AU 2004-252091 20040604
CA 2528067 AA 20050106 CA 2004-2528067 20040604
EP 1633778 A1 20060315 EP 2004-754360 20040604
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, FI, RO, CY, TR, BG, CZ, EE, HU, PL, SK
US 2005271675 A1 20051208 US 2004-5851 20041206
WO 2005117965 A1 20051215 WO 2005-US19678 20050603
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
US 2006134143 A1 20060622 US 2005-559825 20051202
PRAI US 2003-476598P P 20030605
WO 2004-US17736 W 20040604
US 2004-5851 A 20041206

AB Immunogenic compns. and methods for eliciting an immune response against B. anthracis and other bacilli are provided that include immunogenic conjugates of a poly-γ-glutamic acid (γPGA) polypeptides of B. anthracis, or of another Bacillus that expresses a γPGA polypeptide. The γPGA conjugates elicit an effective immune response against B. anthracis, or against another Bacillus, in mammalian hosts to which the conjugates are administered. The conjugate consists of γ-D-PGA and carrier selected from bovine serum albumin, recombinant Bacillus protective antigen, recombinant Pseudomonas aeruginosa exotoxin A, tetanus toxoid, diphtheria toxoid, pertussis toxoid, Clostridium perfringens toxoid, HBsAg, HBcAg, heyhole limpet hemocyanin, horseshoe crab hemocyanin, edestin, mammalian serum albumin, mammalian Ig., analog or mimetic, or combination of two or more. The preferred conjugate consists of γ-D-PGA and Bacillus protective antigen.

RE.CNT 9 THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
ALL CITATIONS AVAILABLE IN THE RE FORMAT

L17 ANSWER 6 OF 22 USPATFULL on STN
AN 2005:275142 USPATFULL
TI Compositions and methods for topical diagnostic and therapeutic transport
IN Dake, Michael D., Stanford, CA, UNITED STATES
Waugh, Jacob M., Mountain View, CA, UNITED STATES
PA Essentia Biosystems, Inc, Mountain View, CA, UNITED STATES (U.S. corporation)
PI US 2005239705 A1 20051027
AI US 2005-73307 A1 20050303 (11)
PRAI US 2004-550014P 20040303 (60)
DT Utility
FS APPLICATION
LREP MORGAN & FINNEGAN, L.L.P., 3 World Financial Center, New York, NY, 10381-2101, US
CLMN Number of Claims: 191
ECL Exemplary Claim: 1

DRWN 17 Drawing Page(s)
LN.CNT 3191
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions and methods are provided that are useful for the delivery, including transdermal delivery, of biologically active agents, such as non-protein non-nucleotide therapeutics and protein-based therapeutics excluding insulin, botulinum toxins, antibody fragments, and VEGF. The compositions and methods are particularly useful for topical delivery of antifungal agents and antigenic agents suitable for immunization. Alternately, the compositions can be prepared with components useful for targeting the delivery of the compositions as well as imaging components.

L17 ANSWER 7 OF 22 USPATFULL on STN
AN 2005:157794 USPATFULL
TI Fluorinated carbohydrate conjugates
IN McBride, William J., Boonton, NJ, UNITED STATES
Goldenberg, David M., Mendham, NJ, UNITED STATES
PA Immunomedics, Inc., Morris Plains, NJ, UNITED STATES (U.S. corporation)
PI US 2005136001 A1 20050623
AI US 2004-901441 A1 20040729 (10)
PRAI US 2003-490884P 20030729 (60)
DT Utility
FS APPLICATION
LREP Paul M. Booth, Ph.D., Heller Ehrman White & McAuliffe, 1717 Rhode Island Avenue, N.W., Washington, DC, 20036-3001, US
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN 15 Drawing Page(s)
LN.CNT 2380
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are novel conjugates that include fluorinated carbohydrate molecules and methods for synthesizing the conjugates. The fluorinated carbohydrate molecule may include a radioisotope. The method of synthesizing the conjugate is useful for labeling selected molecules, and the conjugates may be useful in diagnostic or therapeutic methods. Particularly, the conjugates may be useful in diagnostic or therapeutic kits.

L17 ANSWER 8 OF 22 USPATFULL on STN
AN 2005:138029 USPATFULL
TI Modified polypeptides with therapeutic activity and methods of use
IN Mayo, Kevin H., Minneapolis, MN, UNITED STATES
PA Regents of the University of Minnesota, Minneapolis, MN, UNITED STATES (U.S. corporation)
PI US 2005118678 A1 20050602
AI US 2004-967060 A1 20041015 (10)
PRAI US 2003-512372P 20031017 (60)
DT Utility
FS APPLICATION
LREP MUETING, RAASCH & GEBHARDT, P.A., P.O. BOX 581415, MINNEAPOLIS, MN, 55458, US
CLMN Number of Claims: 44
ECL Exemplary Claim: 1
DRWN 16 Drawing Page(s)
LN.CNT 2102
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Polypeptides modified by fatty acid conjugation and methods of using such modified polypeptides in treating bacterial infections, including the treatment of antibiotic resistant bacterial infections, are disclosed.

L17 ANSWER 9 OF 22 USPATFULL on STN
AN 2005:117278 USPATFULL

TI Multivalent carriers of bi-specific antibodies
IN Hansen, Hans J., Picayune, MS, UNITED STATES
McBride, William J., Boonton, NJ, UNITED STATES
Qu, Zhengxing, Warren, NJ, UNITED STATES
PA Immunomedics, Inc., Morris Plains, NJ, UNITED STATES (U.S. corporation)
PI US 2005100543 A1 20050512
AI US 2004-882151 A1 20040701 (10)
PRAI US 2003-483832P 20030701 (60)
DT Utility
FS APPLICATION
LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1717 RHODE ISLAND AVE, NW, WASHINGTON, DC, 20036-3001, US
CLMN Number of Claims: 35
ECL Exemplary Claim: 1
DRWN 9 Drawing Page(s)
LN.CNT 5871
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Provided herein are targetable constructs that are multivalent carriers of bi-specific antibodies, i.e., each molecule of a targetable construct can serve as a carrier of two or more bi-specific antibodies. Also provided are targetable complexes formed by the association of a targetable construct with two or more bi-specific antibodies. The targetable constructs and targetable complexes of the invention are incorporated into biosensors, kits and pharmaceutical compositions, and are used in a variety of therapeutic and other methods.

L17 ANSWER 10 OF 22 USPATFULL on STN
AN 2005:30279 USPATFULL
TI D-amino acid peptides
IN McBride, William J., Boonton, NJ, UNITED STATES
Goldenberg, David M., Mendham, NJ, UNITED STATES
PA Immunomedics, Inc., Morris Plains, NJ (U.S. corporation)
PI US 2005025709 A1 20050203
AI US 2004-866180 A1 20040614 (10)
PRAI US 2003-478403P 20030613 (60)
DT Utility
FS APPLICATION
LREP HELLER EHRMAN WHITE & MCAULIFFE LLP, 1666 K STREET,NW, SUITE 300, WASHINGTON, DC, 20006
CLMN Number of Claims: 151
ECL Exemplary Claim: 1
DRWN 18 Drawing Page(s)
LN.CNT 4255
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention provides compounds of the formula X--R.sup.1-D-[Dpr, Orn or Lys](A)-R.sup.2(Z)-D-[Dpr, Orn or Lys](B)--R.sup.3(Y)--NR.sup.4R.sup.5; or R.sup.1(X)-D-[Dpr, Orn or Lys](A)-R.sup.2(Z)-D-[Dpr, Orn or Lys](B)--R.sup.3(Y)--NR.sup.4R.sup.5, in which X is a hard acid cation chelator, a soft acid cation chelator or Ac--, R.sup.1, R.sup.2 and R.sup.3 are independently selected from a covalent bond or one or more D-amino acids that can be the same or different, Y is a hard acid cation chelator, a soft acid cation chelator or absent, Z is a hard acid cation chelator, a soft acid cation chelator or absent, and A and B are haptens or hard acid cation chelators and can be the same or different, and R.sup.4 and R.sup.5 are independently selected from the group consisting of hard acid cation chelators, soft acid cation chelators, enzymes, therapeutic agents, diagnostic agents and H. The present invention also provides methods of using these compounds and kits containing the compounds.

L17 ANSWER 11 OF 22 USPATFULL on STN
AN 2005:3843 USPATFULL
TI Therapeutic and diagnostic conjugates for use with multispecific antibodies

IN McBride, William J., Boonton, NJ, UNITED STATES
Goldenberg, David M., Mendham, NJ, UNITED STATES
Noren, Carl, Mt. Arlington, NJ, UNITED STATES
Hansen, Hans J., Picayune, MS, UNITED STATES
PA IMMUNOMEDICS, INC. (U.S. corporation)
PI US 2005002945 A1 20050106
AI US 2004-776470 A1 20040211 (10)
RLI Continuation-in-part of Ser. No. US 2002-150654, filed on 17 May 2002, PENDING Continuation-in-part of Ser. No. US 1999-382186, filed on 23 Aug 1999, ABANDONED Continuation-in-part of Ser. No. US 1999-337756, filed on 22 Jun 1999, PENDING Continuation-in-part of Ser. No. US 2001-823746, filed on 3 Apr 2001, PENDING Continuation-in-part of Ser. No. US 1999-337756, filed on 22 Jun 1999, PENDING
PRAI US 1998-90142P 19980622 (60)
US 1998-104156P 19981014 (60)
US 1998-90142P 19980622 (60)
US 1998-104156P 19981014 (60)
DT Utility
FS APPLICATION
LREP FOLEY AND LARDNER, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007
CLMN Number of Claims: 135
ECL Exemplary Claim: 1
DRWN 18 Drawing Page(s)
LN.CNT 3522
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Disclosed are compounds that include two or more haptens conjugated by a spacer or a carrier. The haptens may include diethylenetriaminepentaacetate (DTPA), histimine-succinyl-glutamine (HSG), or combinations of DTPA and HSG. The compound also includes an effector molecule which may be conjugated to one or more of the haptens, the spacer/carrier, or both. The effector molecule may be conjugated by a number of linkages including an ester linkage, an imino linkage, an amino linkage, a sulfide linkage, a thiosemicarbazone linkage, a semicarbazone linkage, an oxime linkage, an ether linkage, or combinations of these linkages. Also disclosed are methods of synthesizing the compounds and/or precursors of the compounds.

L17 ANSWER 12 OF 22 USPATFULL on STN
AN 2004:280799 USPATFULL
TI Multi-component biological transport systems
IN Waugh, Jacob, Mountain View, CA, UNITED STATES
Dake, Michael, Stanford, CA, UNITED STATES
PA Essentia Biosystems, Inc., Mountain View, CA (U.S. corporation)
PI US 2004220100 A1 20041104
AI US 2004-793138 A1 20040303 (10)
RLI Continuation-in-part of Ser. No. US 2001-910432, filed on 20 Jul 2001, PENDING
PRAI US 2000-220244P 20000721 (60)
DT Utility
FS APPLICATION
LREP MORGAN & FINNEGAN, L.L.P., 3 WORLD FINANCIAL CENTER, NEW YORK, NY, 10281-2101
CLMN Number of Claims: 240
ECL Exemplary Claim: 1
DRWN 12 Drawing Page(s)
LN.CNT 3742
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Compositions and methods are provided that are useful for the delivery, including transdermal delivery, of biologically active agents, including nucleic acids and therapeutic proteins including insulin, larger therapeutic proteins such as botulinum toxin and other biologically active agents such as a therapeutic protein which does not therapeutically alter blood glucose levels, a therapeutic nucleic

acid-based agent, a non-protein non-nucleic acid therapeutic agent such as an antifungal agent or alternately an agent for immunization. The compositions can be prepared with components useful for targeting the delivery of the compositions as well as imaging components.

L17 ANSWER 13 OF 22 USPATFULL on STN
AN 2004:203967 USPATFULL
TI Pyrrolidones with anti-HIV activity
IN Wu, Baogen, San Diego, CA, UNITED STATES
He, Yun, San Diego, CA, UNITED STATES
Ngyuen, Truc, San Diego, CA, UNITED STATES
Kuhen, Kelli L., Carlsbad, CA, UNITED STATES
Ellis, David Archer, San Diego, CA, UNITED STATES
Jiang, Tao, San Diego, CA, UNITED STATES
Xe, Xiaohui, San Diego, CA, UNITED STATES
Yang, Kunyong, San Diego, CA, UNITED STATES
Bursulaya, Badry, San Diego, CA, UNITED STATES
PA IRM LLC, a Delaware LLC, Hamilton HM LX, BERMUDA (U.S. corporation)
PI US 2004157859 A1 20040812
AI US 2003-690873 A1 20031021 (10)
PRAI US 2002-422619P 20021030 (60)
US 2002-420480P 20021021 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 22
ECL Exemplary Claim: 1
DRWN 101 Drawing Page(s)
LN.CNT 3331
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to inhibition of viruses, e.g., HIV using pyrrolidones and compounds related to pyrrolidones. The invention further relates to methods for identifying and using agents, including small molecule chemical compositions that inhibit HIV in a cell; as well as to methods of prophylaxis, and therapy related to HIV infection and related disease states such as AIDS.

L17 ANSWER 14 OF 22 USPATFULL on STN
AN 2004:197449 USPATFULL
TI Oxindoles with anti-HIV activity
IN He, Yun, San Diego, CA, UNITED STATES
Jiang, Tao, San Diego, CA, UNITED STATES
Kuhen, Kelli L., Carlsbad, CA, UNITED STATES
Ellis, David Archer, San Diego, CA, UNITED STATES
Wu, Baogen, San Diego, CA, UNITED STATES
Wu, Tom Yao-Hsiang, La Jolla, CA, UNITED STATES
Bursulaya, Badry, San Diego, CA, UNITED STATES
PA IRM LLC, a Delaware LLC, Hamilton, BERMUDA (U.S. corporation)
PI US 2004152755 A1 20040805
AI US 2003-690802 A1 20031021 (10)
PRAI US 2002-420482P 20021021 (60)
US 2002-420481P 20021021 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 21 Drawing Page(s)
LN.CNT 2180
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to inhibition of viruses, e.g., HIV using oxindoles and compounds related to oxindoles. The invention further

relates to methods for identifying and using agents, including small molecule chemical compositions that inhibit HIV in a cell; as well as to methods of prophylaxis, and therapy related to HIV infection and related disease states such as AIDS.

L17 ANSWER 15 OF 22 USPATFULL on STN
AN 2004:197413 USPATFULL
TI Quinolones with anti-HIV activity
IN He, Yun, San Diego, CA, UNITED STATES
Ellis, David Archer, San Diego, CA, UNITED STATES
Anaclerio, Beth Marie, San Diego, CA, UNITED STATES
Kuhen, Kelli L., Carlsbad, CA, UNITED STATES
Wu, Baogen, San Diego, CA, UNITED STATES
Jiang, Tao, San Diego, CA, UNITED STATES
PA IRM LLC, a Delaware LLC, Hamilton, HM LX, BERMUDA (U.S. corporation)
PI US 2004152719 A1 20040805
US 7019141 B2 20060328
AI US 2003-690738 A1 20031021 (10)
PRAI US 2002-420163P 20021021 (60)
DT Utility
FS APPLICATION
LREP TOWNSEND AND TOWNSEND AND CREW, LLP, TWO EMBARCADERO CENTER, EIGHTH FLOOR, SAN FRANCISCO, CA, 94111-3834
CLMN Number of Claims: 17
ECL Exemplary Claim: 1
DRWN 14 Drawing Page(s)
LN.CNT 2027
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to inhibition of viruses, e.g., HIV using quinolones and compounds related to quinolones. The invention further relates to methods for identifying and using agents, including small molecule chemical compositions that inhibit HIV in a cell; as well as to methods of prophylaxis, and therapy related to HIV infection and related disease states such as AIDS.

L17 ANSWER 16 OF 22 USPATFULL on STN
AN 2004:76181 USPATFULL
TI Immunogenicity-enhancing carriers and compositions thereof and methods of using the same
IN Waggoner, David W., JR., Seattle, WA, UNITED STATES
Coon, Michael E., Seattle, WA, UNITED STATES
PI US 2004057958 A1 20040325
AI US 2003-441944 A1 20030519 (10)
PRAI US 2002-381550P 20020517 (60)
DT Utility
FS APPLICATION
LREP DONALD W. WYATT, CELL THERAPEUTICS, INC., 501 ELLIOTT AVENUE WEST, #400, SEATTLE, WA, 98119
CLMN Number of Claims: 85
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2556
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention is directed to compositions comprising a substantially non-antigenic carrier associated with an antigen and the use of such compositions to enhance the immunogenicity of the associated antigen. In addition, the compositions of the invention may be used to generate an immune response directed predominantly to an antigen associated with a carrier. Specific carriers of the invention include homopolymers and copolymers of polyamino acids. Compositions of the invention are used according to the invention to elicit or enhance an immune response directed against an antigen and may be used for the prevention and treatment of infection and disease, for example. Additionally, compositions of the invention are useful for generating an

antibodies specific for an antigen and, accordingly, may be used to generate antigen-specific antibodies suitable for the diagnosis or treatment of infection and disease.

L17 ANSWER 17 OF 22 USPATFULL on STN
AN 2004:70645 USPATFULL
TI Electroporation methods for introducing bioactive agents into cells
IN Barman, Shikha P., Bedford, MA, UNITED STATES
Hedley, Mary Lynne, Lexington, MA, UNITED STATES
Wang, Daqing, Bedford, MA, UNITED STATES
PI US 2004053873 A1 20040318
AI US 2003-370131 A1 20030219 (10)
PRAI US 2002-357542P 20020215 (60)
DT Utility
FS APPLICATION
LREP FISH & RICHARDSON PC, 225 FRANKLIN ST, BOSTON, MA, 02110
CLMN Number of Claims: 33
ECL Exemplary Claim: 1
DRWN 6 Drawing Page(s)
LN.CNT 1987
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The invention provides compositions and methods for introducing bioactive agents into cells. Bioactive agents are provided together with a delivery vehicle and a cell is subjected to electroporation, thereby resulting in the introduction of the bioactive agent into the cell.

L17 ANSWER 18 OF 22 USPATFULL on STN
AN 2004:57028 USPATFULL
TI Polymeric delivery systems
IN Griffiths, Gary L., Morristown, NJ, UNITED STATES
Goldenberg, David M., Medham, NJ, UNITED STATES
Hansen, Hans J., Picayune, MS, UNITED STATES
PA Immunomedics, Inc. (U.S. corporation)
PI US 2004043030 A1 20040304
AI US 2003-456580 A1 20030609 (10)
RLI Continuation-in-part of Ser. No. US 2002-209592, filed on 31 Jul 2002, PENDING
PRAI US 2001-308605P 20010731 (60)
DT Utility
FS APPLICATION
LREP Stephen B. Maebius, Foley & Lardner, Washington Harbour, 3000 K Street, N.W., Suite 500, Washington, DC, 20007-5143
CLMN Number of Claims: 73
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 2547
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a method of targeting an agent towards a targeting site in a tissue comprising administering a multi-specific antibody or antibody fragment comprising a targeting arm and a capture arm that binds to a polymer conjugate, and administering a polymer conjugate to the tissue. The present invention also relates to a kit for targeting a target site within a comprising a multi-specific antibody or antibody fragment comprising a targeting arm and a capture arm that binds to a polymer conjugate, and a polymer conjugate.

L17 ANSWER 19 OF 22 USPATFULL on STN
AN 2003:282254 USPATFULL
TI Use of bi-specific antibodies for pre-targeting diagnosis and therapy
IN Goldenberg, David M., Mendham, NJ, UNITED STATES
Hansen, Hans J., Picayune, MS, UNITED STATES
Leung, Shui-On, Shatin,NT, HONG KONG
McBride, William J., Boonton, NJ, UNITED STATES

Qu, Zhengxing, Warren, NJ, UNITED STATES
PA IMMUNOMEDICS, INC. (U.S. corporation)
PI US 2003198595 A1 20031023
AI US 2002-150654 A1 20020517 (10)
RLI Continuation-in-part of Ser. No. US 1999-382186, filed on 23 Aug 1999, PENDING Continuation-in-part of Ser. No. US 2001-823746, filed on 3 Apr 2001, PENDING
PRAI US 1998-104156P 19981014 (60)
US 1998-90142P 19980622 (60)
DT Utility
FS APPLICATION
LREP FOLEY AND LARDNER, SUITE 500, 3000 K STREET NW, WASHINGTON, DC, 20007
CLMN Number of Claims: 127
ECL Exemplary Claim: 1
DRWN 7 Drawing Page(s)
LN.CNT 4670
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The present invention relates to a bi-specific antibody or antibody fragment having at least one arm that specifically binds a targeted tissue and at least one other arm that specifically binds a targetable construct. The targetable construct comprises a carrier portion which comprises or bears at least one epitope recognizable by at least one arm of said bi-specific antibody or antibody fragment. The targetable construct further comprises one or more therapeutic or diagnostic agents or enzymes. The invention provides constructs and methods for producing the bi-specific antibodies or antibody fragments, as well as methods for using them.

L17 ANSWER 20 OF 22 USPATFULL on STN
AN 2003:158943 USPATFULL
TI Therapeutic uses of polyvalent compositions in infectious diseases
IN Mekalanos, John J., Charlestown, MA, UNITED STATES
Wang, Ying, Brookline, MA, UNITED STATES
Collier, R. John, Wellesley Hills, CA, UNITED STATES
Mourez, Michael, Boston, MA, UNITED STATES
PI US 2003108556 A1 20030612
AI US 2002-165762 A1 20020607 (10)
PRAI US 2001-296942P 20010608 (60)
DT Utility
FS APPLICATION
LREP EDWARDS & ANGELL, LLP, P.O. BOX 9169, BOSTON, MA, 02209
CLMN Number of Claims: 48
ECL Exemplary Claim: 1
DRWN 4 Drawing Page(s)
LN.CNT 1705
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB New therapeutic methods and compositions are provided for treating against an infectious agent in a mammal by administration of a polymeric material having linked thereto a plurality of therapeutic agents against the infective agent, wherein the polymer comprises polymerized dextran or ethylene glycol units. The compositions and methods of the invention are particularly useful to treat against bacterial infections, including treatment of mammalian cells infected with gram-negative bacteria or gram-positive bacteria. The compositions of the invention can be useful for treating against anthrax, staphylococcus, pneumococcus and other bacteria, parasites, fungi, viral and protozoan infections.

L17 ANSWER 21 OF 22 USPATFULL on STN
AN 2002:219333 USPATFULL
TI Use of high density microparticles for removal of pathogens
IN Cook, David N., Lafayette, CA, UNITED STATES
Monroy, Rodney L., Rockport, MA, UNITED STATES
PI US 2002117453 A1 20020829
US 6730230 B2 20040504

AI US 2002-43471 A1 20020111 (10)
PRAI US 2001-262443P 20010116 (60)
DT Utility
FS APPLICATION
LREP CARELLA, BAYRNE, BAIN, GILFILLAN,, CECCHI, STEWART & OLSTEIN, 6 Becker Farm Road, Roseland, NJ, 07068
CLMN Number of Claims: 32
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 877
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Methods of using high-density microparticles to bind and remove pathogens from biological fluids are disclosed. Pathogens include prions, viruses, bacteria and protozoa.

L17 ANSWER 22 OF 22 USPATFULL on STN
AN 1999:50841 USPATFULL
TI Antigen-processing cell-targeted conjugates
IN Swadesh, Joel K., 285 Plantation St., No. 718, Worcester, MA, United States 01604
Sevoian, Martin, 167 Montague Rd., North Amherst, MA, United States 01059
PI US 5898033 19990427
AI US 1997-994334 19971219 (8)
RLI Continuation of Ser. No. US 1995-475528, filed on 7 Jun 1995, now abandoned
DT Utility
FS Granted
EXNAM Primary Examiner: MacMillan, Keith D.
LREP Fish & Richardson P.C.
CLMN Number of Claims: 18
ECL Exemplary Claim: 1
DRWN No Drawings
LN.CNT 561
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB An anti-inflammatory conjugate including a polyamino acid backbone, a non-steroidal anti-inflammatory agent, and a moiety linking the anti-inflammatory agent to the backbone, wherein the polyamino acid backbone has a molecular weight greater than 250 kD.

=> s l17 and ((poly glutamic acid?)(2w)(anthrax or anthracis))
L18 0 L17 AND ((POLY GLUTAMIC ACID?)(2W)(ANTHRAX OR ANTHRACIS))

=> s l17 and ((poly glutamic acid?)(2w)(conjugate?))
L19 1 L17 AND ((POLY GLUTAMIC ACID?)(2W)(CONJUGATE?))

=> d

L19 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2006 ACS on STN
AN 2005:14426 CAPLUS
DN 142:112426
TI Bacillus capsular poly-γ-glutamic acid conjugates for eliciting immune responses against Bacillus infection
IN Schneerson, Rachel; Leppla, Stephen; Robbins, John B.; Shiloach, Joseph; Kubler-Kielb, Joanna; Liu, Darrell; Majadly, Fathy
PA United States Dept. of Health and Human Services, USA
SO PCT Int. Appl., 67 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 3

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

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     AU 2004252091        A1    20050106    AU 2004-252091         20040604
     CA 2528067           AA    20050106    CA 2004-2528067        20040604
     EP 1633778           A1    20060315    EP 2004-754360         20040604
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     US 2005271675        A1    20051208    US 2004-5851           20041206
     WO 2005117965        A1    20051215    WO 2005-US19678        20050603
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            NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK,
            SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU,
            ZA, ZM, ZW
        RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM,
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            EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT,
            RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
            MR, NE, SN, TD, TG
     US 2006134143        A1    20060622    US 2005-559825         20051202
PRAI US 2003-476598P      P     20030605
     WO 2004-US17736      W     20040604
     US 2004-5851         A     20041206
RE.CNT  9     THERE ARE 9 CITED REFERENCES AVAILABLE FOR THIS RECORD
              ALL CITATIONS AVAILABLE IN THE RE FORMAT
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